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FISCAL YEAR ENDED JUNE 30, 1919

REPORT OF THE
GOVERNOR GENERAL OF THE
PHILIPPINE ISLANDS

TO THE SECRETARY OF WAR

1918

(JANUARY 1, 1918, TO DECEMBER 31, 1918)

(IN ONE PART)



WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

REPORT OF
THE GOVERNOR GENERAL OF THE
PHILIPPINE ISLANDS

JANUARY 1 TO DECEMBER 31, 1918

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REPORT OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS.

JANUARY 1 TO DECEMBER 31, 1918.

MANILA, *September 25, 1919.*

SIR: I have the honor to submit a report of the conditions in the Philippine Islands for the calendar year 1918.

The activities of government here and the undivided sentiment of the people of the islands were devoted to loyal support of the United States in the prosecution of the great war. Every assistance required by the home Government and every effort which could be devised by the Filipino people were carried out with widespread enthusiasm and unstinted devotion. The attitude of the people here during these years of all-important achievement by the United States in the arena of war was a gratifying response to the practical development of American principles of justice in government in the Philippines. It was not only possible to withdraw a large part of the American military and naval establishments in the islands for necessary service elsewhere; it would have been entirely feasible to withdraw the entire American garrisons here and depend upon the Filipino people to defend American interests and the prestige of the American flag in the archipelago.

With notable self-restraint, the people during the war ceased all expression of their desire for independence, until after the signing of the armistice, when the national sentiment of the Filipinos again took form with the appointment by the legislature of a commission of leading citizens of the islands to present to the United States Congress their request for independence. The undersigned concurs in the belief of the Filipino people that they have now established the stable government demanded by Congress as a prerequisite for the granting of their independence, and has so reported to Congress together with an expression of his hope that early independence will be conceded.

COUNCIL OF DEFENSE.

Acting upon the suggestion of the Secretary of War, the undersigned appointed a committee to make recommendations for the organization of the council of defense for the Philippine Islands. The committee was composed of Gen. Ralph W. Jones, of the National Guard; Capt. Hugh Straughn, of the United States Army; Mr. W. H. Macfarlane, president and general manager of the Insular Lumber Co.; Mr. Julius S. Reis, president of the Manila Trading & Supply Co.; Mr. Vicente Morente, undersecretary of commerce and communications; and Mr. T. J. Wolff, a prominent business man.

In accordance with the recommendation of this committee, the undersigned, by Executive Order No. 25, series of 1918, named a number of Government officials and prominent residents of Manila as members of the Philippine Council of Defense.

The work undertaken by the council of defense was outlined in general as follows:

1. To inform the people as to the causes of the war and as to the aims of the United States in the war.
2. To handle campaigns for the Liberty loans, war savings stamps, and Red Cross drives.
3. To encourage economy.
4. To aid in the suppression of sedition.
5. Public welfare.

The work of the council met with a most gratifying response throughout the islands, and furthered the consolidation of the people into one homogeneous body, thus affording opportunity for more concrete expressions of national loyalty to the Government of the United States.

PHILIPPINE NATIONAL GUARD.

The organization of the Philippine National Guard, of which I made mention in my last report, was continued until November 20, when the President's call to the Federal service for a month's training came. The call was for the division as organized, with Brig. Gen. F. R. Day (colonel, United States Army), commanding the division, and First Brigade; Brig. Gen. Quinlan (major, United States Army), commanding the Second Brigade; and Brig. Gen. R. W. Jones commanding the Third Brigade.

Upon the recommendation of the militia commission the legislature, then in session, enacted a law voting insular funds for a further period of training of two months for the division. Shortly before the close of the period of training and in view of the impending termination of the war it became necessary to muster out this military unit, and this took place on February 19, 1919.

It should be noted that the organization of this division, composed of volunteers for service with the United States Army, comprised many of the best-educated young men in the islands, who were eager to offer themselves for duty at the front in support of the ideals of liberty, justice, and democracy which had brought our country into the war. While, unfortunately, the division was not ordered to active service, the moral and physical training afforded, and the patriotic feeling aroused were of the utmost benefit to the islands.

COUNCIL OF STATE.

In October, 1918, the council of state was organized by executive order of the Governor General, to advise him on matters of importance affecting the welfare of the country. The speaker of the house of representatives, Hon. Sergio Osmeña, and the president of the senate, Hon. Manuel L. Quezon, were appointed members of the council in addition to the heads of the executive departments. Mr. Osmeña was elected vice president of the council. Weekly meetings are held, thus superseding the regular cabinet meetings of the preceding two years.

PHILIPPINE NATIONAL BANK.

The bank has inaugurated during the year, in addition to the five branches already established (New York, Iloilo, Cebu, Corregidor, and Nueva Ecija), six more, to wit, in Aparri, Cagayan; in Davao, Mindanao; in Bacolod, Negros Occidental; in Legaspi, Albay; in Lucena, Tayabas; and in Shanghai, China. Within this year it is expected that necessary preparations will be completed for the establishment of new branches in Zamboanga, Mindanao; in Tacloban, Leyte; in Vigan, Ilocos Sur; and in Rosales or Lingayen, Pangasinan.

The net profits obtained during the year from branches in operation amounted to ₱1,488,807.62, representing 33.45 per cent of the total gain.

The following is a comparative statement of the resources of the bank covering the period May, 1916, to December 31, 1918:

May 23, 1916	₱11,800,000
July 15, 1916	29,300,000
Dec. 31, 1916	50,700,000
June 30, 1917	98,035,000
Dec. 31, 1917	138,276,000
June 30, 1918	210,924,000
Dec. 31, 1918	248,798,000

MANILA RAILROAD CO.

The receipts of the road from operation increased by ₱2,223,361.09 over those of last year.

The principal items making up this increased revenue are—

Increased passenger receipts	₱1,091,609
Increased express receipts	289,006
Larger volume freight handled	197,706
Freight rate increase (approximately)	621,200

The company reports that an upward revision of freight rates, imposed in July and October, produced additional revenue of approximately ₱621,200. The staple food supplies are, however, scarcely affected by the new tariff.

The company is able to handle the increased freight traffic through improvement of its terminal facilities at the Manila station and through the reconstruction and restoration of 187 freight cars, most of which had been out of service for a number of years. New cars and engines are being purchased in the United States.

The operating expenses for 1918 exceeded those for 1917 by ₱2,746,301.60, and this is accounted for as follows:

1. A greater consumption of fuel and supplies as a result of increased train mileage. Also the greatly increased cost of coal, the principal item of expense.

2. Supplies and materials increased in cost from 100 to 300 per cent over normal items.

3. The average increase in wages for unskilled labor was 25 per cent; for employees receiving a salary of ₱1,200 per annum or less, 44.87 per cent; for employees receiving a salary of more than ₱1,200 per annum, 27.64 per cent. The total for staff salaries was approximately the same as that for 1917.

4. Deferred maintenance, ₱450,000.

While the roadbed, rolling stock, and buildings were maintained in a serviceable condition throughout 1917, no attempt was made to recuperate from the effects of maintenance deferred in the three years next preceding, nor were extensive improvements undertaken. Last year's operations, however, showed a sufficient profit to warrant a more liberal expenditure on maintenance and improvements. Consequently, the directorate authorized a substantial outlay for reconstruction and betterment work.

The Tayug branch of the road was completed to San Quintin, a distance of 6,257 kilometers. The cost of the work is ₱267,631.93, including the purchase of right of way. The new extension is developing a large amount of traffic, and will add very materially to our operating revenue for 1919.

The Floridablanca branch was extended to Carmen, a distance of 4.26 kilometers, at an estimated cost of ₱87,000. The Carmen extension has been placed in operation and should produce a revenue of ₱300,000 per annum, derived mostly from the Del Carmen sugar central, which is now in course of construction.

NATIONAL COAL CO.

The work of the company for 1918 consisted largely in survey and construction work in the Sibuguey fields in Mindanao and the district north of Cebu. At the date of this writing the Cebu district is producing a small quantity of coal, which is marketed locally at ₱35 a ton and is used by the Philippine Railway Co. The Mindanao fields are much larger in extent and of a quality analyzed as superior to any other known in this part of the world. Railway tracks are now being laid from tidewater to the mines, shafts have been sunk, and a wharf is about to be erected. Considerable delay in beginning operation has been due to serious epidemics of pernicious malaria among the laborers, which the company now has under control. It is believed that the success of the National Coal Co. will solve the fuel problem of the Philippines and greatly increase the wealth and prosperity of the country. The report of the company for the fiscal year 1918-19 is submitted herewith.

FOURTH PHILIPPINE LEGISLATURE—THIRD SESSION.

Eighty-six bills were passed at the last session of the legislature, and all received executive approval. There were passed, also, four bills which, under the terms of the Jones law, were forwarded to the President of the United States for his approval. These are H. No. 1580, permitting, under certain conditions, certain foreigners to remain in the Philippine Islands, notwithstanding any other provision of law to the contrary; H. No. 1134, amending paragraph 200 of section 8 of the revenue act for the Philippine Islands approved by Congress on August 5, 1909; H. No. 1647, authorizing the National Development Co. to acquire mines and mining rights; and H. No. 1194, commonly known as the land bill, amending and compiling laws with reference to the public domain.

Among the more important acts passed are Act No. 2782, appropriating ₱30,705,824 for the extension of free elemental instruction

to all children of school age; Act No. 2792, amending the corporation law; Act No. 2793, providing for the acquisition of patents; Act No. 2803, authorizing the Governor General to designate any secretary or undersecretary to perform the functions of the secretary or undersecretary of any department in their absence; Act No. 2814, creating the National Petroleum Co.; Act No. 2833, amending the income tax; Act No. 2849, creating the National Development Co.; Act No. 2865, creating the National Cement Co.; and Act No. 2862, creating the National Iron Co.

GOVERNMENT PERSONNEL.

The number of persons examined by the bureau of civil service during the year 1918 was 12,239, of which 25 per cent passed. The number of competitors in Spanish examinations was but 474, of whom 24 per cent passed, as compared with 15 per cent in 1917. The changed conditions in the service may be illustrated by comparing these figures with those of 1905, when 3,555 Filipinos were examined in Spanish and 2,917 in English. In 1918, the figures were 474 in Spanish and 11,699 in English.

The number of original appointments made during the year as a result of examinations held in the Philippines was 1,829, compared with 1,315 in 1917 and 1,612 in 1916. Of these 14, or a little less than 1 per cent, were Americans, compared with 32 in 1917 and 33 in 1916. Only four of these were, strictly speaking, original appointments, the remaining 10 representing merely a change of status of persons already in the service from unclassified or temporary to classified and permanent positions. During the 12 months ending July 1, 1918, the number of Americans in the service decreased by 362 (compared with 420 during the preceding 12 months), and the number of Filipinos increased by 1,007. The number of voluntary separations of Americans during 1918 included 150 retired during the year; of the 28 involuntary separations, 12 were for cause, 5 because of reduction in force or abolition of position, and 11 by reason of death—of this latter the estates of 3 were granted the benefit of the retirement gratuity.

FINANCES OF THE INSULAR GOVERNMENT.

The government finances are in a more firm and stable condition than at any period in the history of the Philippines.

The auditor's report, which is printed as a separate document, shows that the current surplus of liquid capital of the insular government increased during the year 1918 in the sum of ₱11,194,061, thereby creating a total of ₱35,598,744, of which ₱24,832,714 is unappropriated. The increase in current surplus exceeded that for 1917 in the sum of ₱1,821,537. The net resources of the insular government comprising reserves and current surplus, appropriated and unappropriated, show an increase for the year of ₱16,661,196. The problem of how best to keep the money in circulation to prevent an undue proportion being locked up in the treasury through the increasing tendency of current surplus has been solved by the government, partly, in the increase of the public works bill for 1919, which is nearly ₱8,000,000 greater than that of 1918, and the appropriation

of over ₱30,000,000 expendable in five years for the purpose of extending the facilities of free elemental instruction, and partly in the investment to be made in permanent assets through the creation of the National Development Co. and other industrial companies created by the legislature, the majority stocks of which are to be financed by the government. The most notable increases in the expense of the central government during 1918 were in connection with the national guard and in the aid to Provinces and municipalities. These contributions to the local governments in the sum of ₱10,150,455, as against ₱8,974,049 in the preceding year are made to assist in the construction and maintenance of highways, bridges, artesian wells, hospitals, schools, and other public works; for primary school instruction and to meet recurring deficiencies in the local revenues of certain specific Provinces and municipalities.

Among the principal factors on which the continued financial dependence of regularly organized Provinces and municipalities upon the central government to finance their various aforementioned activities is based, are (a) inequitable distribution of the general income, especially the proceeds of license and business tax; (b) under-assessment of real property coupled with low tax rate; and (c) real property exemptions. The auditor reports also a net increase in the general expense of the government of ₱3,724,155, due almost wholly to increase in cost of materials and supplies, as well as labor hire, brought about by war and after-war conditions.

Consolidated budget statement, fiscal year 1918, compared with fiscal year 1917.

[Including all departments, bureaus, offices, Provinces, municipalities, cities, and other political subdivisions]

Items.	Fiscal year 1918.	Fiscal year 1917.	Increase (+); decrease (-).
Budget credits:			
<i>Revenue from taxation.....</i>	<i>₱62,492,754.52</i>	<i>₱52,717,587.02</i>	<i>+ ₱9,775,427.60</i>
Excise taxes.....	13,191,923.35	12,993,425.77	+ 258,497.58
Import duties.....	13,479,736.56	11,183,822.41	+ 2,295,914.15
Licenses and business tax.....	17,441,487.20	12,652,927.83	+ 4,788,559.37
Real estate tax.....	7,347,571.21	6,956,902.41	+ 390,668.80
Cedula tax.....	4,659,916.00	4,741,965.00	- 82,049.00
Wharfage tax.....	1,305,477.59	1,137,622.26	+ 167,855.33
Franchise tax.....	1,130,439.23	824,751.18	+ 305,688.05
Income tax.....	2,550,149.20	1,178,006.50	+ 1,372,142.70
Documentary stamp tax.....	847,067.52	682,692.29	+ 164,375.23
Road tax.....	89,334.00	107,388.00	- 18,054.00
Immigration tax.....	207,752.00	152,232.00	+ 55,520.00
Tonnage dues.....	157,756.42	152,690.49	+ 5,065.93
Inheritance tax.....	75,127.74	5,284.83	+ 69,842.91
Other.....	9,016.50	7,665.95	+ 1,350.55
<i>Incidental revenue.....</i>	<i>6,630,491.23</i>	<i>5,712,051.66</i>	<i>+ 918,439.67</i>
Fines and forfeitures.....	1,655,491.74	1,828,356.06	- 172,864.32
United States internal revenue.....	1,919,753.11	1,253,851.23	+ 665,901.88
Revenue from public forests.....	588,984.98	487,665.04	+ 101,319.94
Municipal grants of fishery privileges.....	358,671.60	324,023.32	+ 34,648.28
Cattle registration fees.....	661,515.00	640,070.00	+ 21,445.00
Property and mining claims registration fees.....	75,434.10	79,163.79	- 3,729.69
Sales and rentals of public domain.....	103,423.13	70,957.64	+ 32,465.49
Other.....	1,267,217.57	1,027,964.48	+ 239,253.09
<i>Earnings and other credits.....</i>	<i>29,264,503.52</i>	<i>24,578,115.32</i>	<i>+ 4,686,388.20</i>
Operating revenue of commercial and industrial units.....	21,395,238.13	17,406,716.58	+ 3,988,521.55
Other income of operating units.....	94,838.07	71,847.47	+ 22,990.60
Dividends on bank stock.....	495,589.53	314,786.78	+ 180,802.75
Income from U. S. A. T. freight service.....	.....	337,470.62	- 337,470.62
Income incidental to functional activities.....	3,423,212.93	2,795,665.37	+ 627,547.56
Sales of fixed property.....	384,739.56	140,856.58	+ 243,882.98
Sales of Friar Lands real estate.....	856,656.26	870,822.19	- 14,165.93
Sales of San Lazaro real estate.....	214,299.52	229,246.63	- 14,947.11
Unadjusted insular aid credits.....	500,148.66	.....	+ 500,148.66
Interest on loans and bank deposits.....	342,624.48	211,917.92	+ 130,706.56

Consolidated budget statement, fiscal year 1918, etc.—Continued.

Items.	Fiscal year 1918.	Fiscal year 1917.	Increase (+); decrease (—).
Budget credits—Continued.			
<i>Earnings and other credits—Continued.</i>			
Interests repayments from railway companies	P 290, 202.06		+ P 290, 202.06
Proceeds from loans	807, 400.00	P 1, 774, 900.00	— 967, 500.00
Voluntary contributions from the public	178, 908.92	173, 769.06	+ 5, 139.86
Sales of agricultural bank loans	164, 140.00		+ 164, 140.00
Other credits	35, 466.60	55, 216.30	— 19, 749.70
Credit adjustments—prior year	81, 038.80	194, 899.82	— 113, 861.02
Total budget credits	98, 387, 749.27	83, 007, 493.90	+ 15, 380, 255.37
Budget charges:			
Salaries	25, 052, 869.62	23, 071, 722.37	+ 1, 981, 147.25
Wages	9, 940, 858.47	7, 788, 313.99	+ 2, 152, 544.48
Consumption of supplies and materials	11, 318, 041.08	8, 896, 455.61	+ 2, 421, 585.47
Postal, telegraph, telephone, and cable service	549, 745.30	468, 755.19	+ 80, 990.11
Rental of buildings and grounds	428, 449.43	378, 332.47	+ 50, 116.96
Freight, express, and delivery service	622, 233.08	540, 843.72	+ 81, 389.36
Travel expense of personnel	2, 616, 958.54	2, 197, 235.65	+ 419, 722.89
Illumination and power service	781, 894.97	714, 532.09	+ 67, 362.88
Printing and binding reports, documents, and publications	258, 767.59	201, 222.48	+ 57, 545.11
Discretionary expenditures	67, 431.39	50, 068.58	+ 17, 362.81
Contributions and gratuities (other than to local governments)	483, 127.22	454, 275.05	+ 28, 852.17
Retirement gratuities, act 2589	785, 003.66	584, 353.28	+ 201, 550.38
Administrative expense	28, 895.88	20, 063.86	+ 8, 832.02
Engineering subcontracts	173, 419.39	327, 886.67	— 154, 467.28
Insurance losses	297, 161.21	59, 475.52	+ 237, 685.69
Debit adjustment—prior year	17, 448.62	173, 720.37	— 156, 271.75
Extraordinary losses	88, 853.80	44, 815.88	+ 44, 037.92
Repair service	6, 372, 891.39	4, 615, 187.42	+ 1, 757, 703.97
Interest on bonded and loan debt	1, 855, 600.55	1, 835, 084.99	+ 20, 515.56
Other expense	4, 044, 960.11	2, 514, 061.48	+ 1, 530, 907.63
Purchase of fixed property	2, 622, 038.87	1, 835, 829.78	+ 786, 209.09
Public works construction projects	11, 580, 822.10	8, 348, 105.62	+ 3, 232, 716.48
Other permanent investments	8, 721, 142.04	1, 983, 228.68	+ 6, 737, 913.36
Interest on railroad bonds under guaranty contracts	683, 920.00	733, 674.96	— 49, 754.96
Payments to sinking funds	1, 126, 811.94	1, 081, 645.13	+ 45, 166.81
Repayments of loans	1, 176, 984.00	1, 125, 924.00	+ 51, 060.00
Provincial loans to exchange stores	132, 824.76	28, 500.00	+ 104, 324.76
Total budget charges	91, 830, 064.01	70, 073, 314.84	+ 21, 756, 749.17
Increase in current surplus for the year	6, 557, 685.26	12, 934, 179.06	— 6, 376, 493.80
Add—Current surplus at the beginning of the year	36, 278, 502.63	23, 344, 323.57	+ 12, 934, 179.06
Current surplus at the end of the year (see balance sheet)	42, 836, 187.89	36, 278, 502.63	+ 6, 557, 685.26

DEPARTMENT OF THE INTERIOR.

HON. RAFAEL PALMA, secretary; Hon. TEODORO M. KALAW, undersecretary.

BUREAU OF NON-CHRISTIAN TRIBES.

The functions of this important bureau were ably administered by Hon. Frank W. Carpenter, governor of the Department of Mindanao and Sulu, and particular attention is invited to his report, which is printed herewith, and which contains a complete and interesting account of the condition of affairs within his jurisdiction.

EXECUTIVE BUREAU.

The chief of this bureau reports that during the year 1918 real property assessments in Batangas, Pampanga, and Tarlac were completely revised so that there are now 21 Provinces, the real property

assessments of which have been revised in accordance with the assessment law.

During the year 21 Provinces were visited by provincial agents and were in general found to be in a satisfactory condition.

By executive orders of the Governor General, 18 new municipalities were organized, effective January 1, 1919.

This bureau has been of great assistance to the bureau of agriculture in the campaign against locust and rinderpest, to the bureau of health in the eradication of epidemics, to the bureau of coast and geodetic survey in securing geographical data, and to the bureau of non-Christian tribes in promoting the general welfare of the non-Christians.

PHILIPPINE CONSTABULARY.

The chief of constabulary reports a very satisfactory condition of peace and order throughout the Archipelago. Even in northern Luzon, where contact between Christians and non-Christians was frequent, no disturbance of any sort has occurred. With the surrender of the Negrito leader Domingo Angcot, on February 27, 1918, the unrest among the people of the mountains of Zambales has ceased.

On December 31, 1917, the commissioned officers of the Philippine Constabulary consisted of 102 Americans and 256 Filipinos, as compared with 39 Americans and 308 Filipinos on December 31, 1918. A large number of the American officers of the constabulary resigned from that organization to join the United States Army during the recent war.

DEPARTMENT OF PUBLIC INSTRUCTION.

HON. CHARLES E. YEATER, secretary; HON. ALEJANDRO ALBERT, undersecretary.

BUREAU OF EDUCATION.

To do away with the unfair burden imposed upon the parents of school children in the form of tuition fees, to abolish class distinction, and to extend the privilege of free attendance in all public schools to all children of school age, the Philippine Legislature passed Act No. 2782, appropriating ₱30,705,824. Upon the recommendation of the department of public instruction, this liberal appropriation was made to spread over a period of five years. This was advantageous, because the great sum involved could not be adequately disposed of in a much shorter period.

As a result of the 20 years continued teaching of English, many thousands of young men and women now entering the activities of life in government and commerce possess a good knowledge of the English language.

The following is a comparative statement of the number of primary, intermediate, and secondary schools in the islands, and the annual and monthly enrollment and daily attendance of each:

Year.	Primary.	Inter- mediate.	Secondary.	Total.
1918.....	4,276	423	48	4,747
1917.....	4,288	368	46	4,702
Annual enrollment:				
1918.....	562,663	64,306	14,529	671,398
1917.....	607,682	56,884	11,432	675,998
Average monthly enrollment:				
1918.....	490,986	56,592	12,897	560,475
1917.....	507,226	50,306	10,093	567,625
Average daily attendance:				
1918.....	455,754	53,232	12,391	521,377
1917.....	467,883	47,230	9,650	514,233

The great demand for teachers led the legislature to authorize the secretary of public instruction to establish new normal schools in Cebu, Laoag, Albay, and Iloilo.

Gardening and planting of fruit and seed trees have been encouraged and required of all children. There are now 138 institutions for the study of agriculture, of which 9 may be properly termed agricultural schools, 12 are farm schools, and 117 are settlement farm schools. Besides these there is the Agricultural School at Muñoz, the pride of Central Luzon.

PHILIPPINE HEALTH SERVICE.

On December 31, 1918, Dr. J. D. Long, the director of health, resigned, and Dr. Vicente de Jesus, the assistant director, was designated acting director of health. The year 1918 was characterized by the appearance of serious epidemics. Of smallpox there were registered in Manila 1,326 cases and 869 deaths, and in the Provinces 40,126 cases and 12,951 deaths. The spread of this disease was due to two causes—the bringing over to Manila, in December of 1917, of two native sailors who had been rescued from shipwreck and happened to develop smallpox upon their landing; in that same month an English sailor from Nankin, China, arrived in Manila and developed smallpox the next day. A vaccination campaign was at once undertaken, but due to lack of vaccine virus it did not accomplish the desired result. It is now estimated that by the end of the year 1919 the vaccination of the people of the islands will have been completed—thus thereby practically ending the ravages of this epidemic.

Influenza occurred twice during the year, in May and June and in October and November. Deaths were due to complications of pneumonia and of diseases of the heart and other organs. Cholera also appeared in the Provinces during the year, but its effects were less disastrous than those of the previous year.

DEPARTMENT OF JUSTICE.

Hon. VICTORINO MAPA, secretary; Hon. JOSE ESCALER, undersecretary.

To fill the vacancy caused by the resignation of Justice Fred C. Fisher from the supreme court bench on September 5, 1918, Hon. Percy M. Moir, judge of the court of first instance for the seventh judicial district, was appointed on November 21, 1918.

During the year 1,316 cases were filed in the supreme court, making an increase of 248 cases over the number of cases filed during the previous year. There was also an increase of 542 in the number of cases disposed of, and a decrease of 810 in the number of cases pending at the end of the year.

The department of justice reports with regret the death of Hon. Ponciano Reyes, late judge of the twenty-sixth judicial district, who perished in the shipwreck of the S. S. *Quantico* on Christmas eve.

The resignations of Hon. John S. Powell, judge of the twenty-third judicial district, effective May 1, 1918; of Hon. William E. McMahon, judge of the eleventh judicial district, effective June 13, 1918; and of Hon. Carter D. Johnston, judge of the twenty-first judicial district, effective July 1, 1917, were accepted.

To fill the vacancies thus created, Hon. Diego Gloria, assistant attorney general, was made judge of the second judicial district, effective February 13, 1918; Hon. Louis M. Southworth, a prominent member of the Philippine bar, judge of the twenty-third judicial district, effective June 20, 1918; and Assistant Director of Posts Primitivo San Agustin, auxiliary judge for the second group of judicial districts, effective July 10, 1918.

BUREAU OF PRISONS.

Upon the resignation of Assistant Director C. J. Thompson, Dr. B. G. Monreal was appointed to succeed him on October 1, 1918.

At the end of the year the prison population of the Philippine Islands consisted of 6,463, of whom 2,635 were confined in Bilibid, 1,052 in Iwahig Penal Colony, 593 in San Ramon Penal Farm, 788 working at Corregidor, 19 in constabulary stations, 53 (insular) working at provincial jails, 37 in San Lazaro Insane Asylum, 4 in City Boys' Reformatory School, 32 in Luneta police station, 1,250 in provincial jails.

Certain improvements have been made in the Iwahig Penal Colony during the year. New roads and buildings were constructed. Eight thousand coconut trees have been planted, and a considerable increase in live stock has been recorded.

Despite the high cost of materials and the scarcity of transportation facilities, it is gratifying to note that the industrial division of the bureau of prisons made during the year 1918 a net profit of ₱56,-986.12, which is an increase of ₱1,326.42 over that of 1917.

DEPARTMENT OF FINANCE.

HON. ALBERTA BARRETTO, secretary; HON. MIGUEL UNSON, undersecretary.

BUREAU OF CUSTOMS.

The report of the insular collector of customs, which is printed as a separate document, shows that the total value of our foreign trade for the year 1918 amounted to ₱467,587,387, as compared with ₱322,-802,674 for the preceding year. The increase is due to greater home production of hemp, coconut oil, sugar, and tobacco products. This is the largest figure ever known in the Philippines. It left a balance

of trade in favor of the islands of ₱73,190,541. The trade balances of 1916, 1917, and 1918 aggregate the considerable sum of ₱144,065,600, or a net balance in favor of the islands of ₱106,444,417 during the two decades of American administration.

Trade with the United States during the past year has increased tremendously as compared with previous years. Imports show an increase of ₱42,407,927 and exports ₱51,825,120 over those recorded in 1917. Trade with England and France has been heavily checked by the war, while that with Japan, China, French East Indies, Australasia, and Spain has increased materially.

BUREAU OF INTERNAL REVENUE.

The collections for the year 1918 amounted to ₱48,508,163.65, as compared with ₱39,937,370.91 for the year 1917, showing an increase of 21.46 per cent.

The total output of distilled spirits during the year 1918 was 15,931,402 proof liters, while that during the year 1917 was 15,073,758 proof liters.

The output of tobacco products has also increased. Taxes during the year 1917 were collected on 488,897 kilos in comparison with 661,569 kilos during the year 1918. Taxes on imported smoking and chewing tobacco have also increased, 389,869 kilos having been imported in 1917, while 446,723 kilos were imported in 1918. The exports of smoking tobacco, however, were less during the year, 35,924 kilos having been exported in comparison with 42,817 kilos in 1917.

Through Government advertising, Manila cigars secured a ready market in America. In 1916 when the tobacco inspection law, Act No. 2613, was passed, export of cigars to the United States was 114,006,746. In 1917 it was 216,124,310, and in 1918 it was 264,871,253.

₱164,344.65, as franchise taxes, accrued to the insular treasury, ₱105,504.25 to the city of Manila and other municipal treasuries, and ₱3,346.23 to the provincial treasuries.

The income tax also increased. As against ₱1,182,888.33 collected in 1917 ₱2,571,575.29 were collected in 1918. The increase was not due to changes in the law but rather to the improved condition, and hence increased earnings of taxpaying corporations and individuals.

TREASURY BUREAU.

The total funds for which the insular treasurer was accountable on December 31, 1918, was ₱173,353,582.94, which sum was distributed as follows: In treasury vaults, \$1,070,590.46, United States currency; and ₱14,399,442.39, Philippine currency; on deposit with local banks, on open account, ₱60,846,586.01, Philippine currency; and on time deposit, ₱3,888,669.94, Philippine currency; on deposit with depositaries in the United States, \$46,038,851.84, United States currency.

On August 16, 1918, pursuant to the provisions of Act No. 2776, which was made effective on that date, the gold standard fund and the silver certificate reserve fund were merged to form a new fund—the currency reserve fund—so that the function of maintaining the

parity of the Philippine currency and of redeeming treasury certificates that have been issued now devolves upon the superseding fund. The amount of this fund on December 31, 1918, was ₱112,549,208.73. This sum less the minimum of the fund on the same date, ₱102,824,160.64, made an excess balance of ₱9,727,048.09.

The flourishing condition of trade and business in the Philippine Islands is reflected in the increased resources of the banks. At the end of the year 1916, they amounted to ₱121,954,154, and by that of 1917, ₱239,247,726, while by that of 1918, ₱399,807,941.

The money in circulation on December 31, 1918, amounted to ₱131,151,883.03 as compared with ₱102,580,313.57 on December 31, 1917.

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES.

HON. GALICANO APACIBLE, secretary; HON. RAFAEL CORPUS, undersecretary.

In the Philippines 1918 was a banner year for agriculture. The six leading crops of the islands, namely, rice, abaca, sugar, coconuts, corn, and tobacco made a total of ₱350,000,000 as against ₱241,000,000 for 1917, which means a net gain for the year of ₱109,000,000. This was the highest figure ever obtained since the creation in 1913 of the statistical division in the bureau of agriculture. As compared with that for the previous five-year period, the year 1918 scored even a greater gain of ₱181,000,000 in value, an increase of 371,000 hectares planted to the above-mentioned leading crops, and an increased yield in kilos and liters of 1,434,000,000. There was a slight decrease in hectarage and in yield of corn, but, even then, its value showed satisfactory gain.

RINDERPEST AND OTHER PESTS.

Rinderpest, which assumed serious proportions in 1916, has abated in virulence. During the year 1918 there were recorded 21,586 cases and 15,747 deaths, as compared with 33,971 cases and 26,951 deaths in 1917.

Most of the Provinces did not suffer from the locust pest, Buluan, in Cotabato, Mindanao, being the only municipality badly ravaged. By this time the pest has practically disappeared.

Abaca pests appeared in some regions, especially in Laguna. To avoid their spread an order was issued, prohibiting the transportation of abaca plants to other noninfected Provinces.

RICE CULTIVATION.

During the year 1918 much attention was given to rice cultivation in the islands. One million three hundred and sixty-eight thousand one hundred and forty hectares were cultivated, 2,684,628,000 liters produced, valued at ₱135,163,375, resulting in an increase of 192,000 hectares in cultivation, an increase in yield of 1,200,000,000 liters, and an increase in value of ₱74,000,000, all over the average of the previous five years. The gain in value over the record crop of 1917 was ₱53,000,000, in round numbers. The average yield per hectare for 1918 established a new record of 26.16 cavans, as against 19.41 cavans per hectare for the previous five years.

BUREAU OF FORESTRY.

The bureau has materially increased its activities and has done all it could to protect forest resources, especially the mangrove swamps, and it is hoped that it will succeed in its laudable work of establishing mangrove forest reserves.

DEPARTMENT OF COMMERCE AND COMMUNICATIONS.

Hon. DIONISIO JAKOSALEM, secretary; Hon. VICENTE MORENTE, undersecretary.

The long-felt need of the government to have a separate bureau or office to which may be entrusted the successful development of Philippine trade, not only in these islands but also in foreign countries, was met with the passage by the Philippine Legislature on January 31, 1918, of Act No. 2728, entitled "An Act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes." To head this newly created bureau, Mr. James J. Rafferty was made director, and Mr. Fidel A. Reyes, assistant director. Director Rafferty having been authorized to make a survey of the commercial field in the United States, Mr. Fidel A. Reyes was made acting director.

To meet the demands of increased commercial activities, this department recommends that government equipment for port works be continually increased, that radio stations be established in all important ports, and that liberal appropriations be made for the establishment of commercial agencies abroad. For the proper distribution of laborers, the department likewise recommends the encouragement of interisland migrations. And, to the end that the constant differences between labor and capital may be amicably settled in the interest of the parties concerned as well as that of the public, it also recommends the establishment in the Philippines of compulsory arbitration.

BUREAU OF PUBLIC WORKS.

No other bureau has suffered more in loss of personnel, on account of the recent war, than the bureau of public works. Of the 11 American designing engineers 10 temporarily joined the National Guard and the Officers' Reserve Corps of the United States Army; of the 29 American district engineers, 13 temporarily left the service; and 4 Filipino engineers enlisted in the National Guard. Moreover, former Directors E. J. Westerhouse and Claude Russell successively left the service. On December 31, 1918, technical employees numbered 125, only 37 of whom were Americans and the rest were Filipinos.

First-class roads have been built in all Provinces and their extension is well under way. A plan to consolidate the various provincial road systems was also adopted and, accordingly, interprovincial and intercoastal roads are now under construction. Despite the lack of materials in the local market, four notable bridges have been completed during the year.

Port works were begun on Piers Nos. 3 and 5, Manila; in the reclamation dock area of Cebu; in Tacloban, Leyte; in Iloilo; in

Catbalogan and Catarman, Samar; and in several ports of Mindanao and Sulu. The bureau has recommended an increase in government equipment for port works so that the islands might meet the demands of increased industrial and commercial activities incident to after-war times and the general economic awakening of the world.

The number of new motor vehicles registered during the year was 1,301, and 6,078 were presented for reregistration. This makes a total registration of 7,379 as compared with 6,024 in 1917.

BUREAU OF POSTS.

The bureau of posts has been maintained upon a self-sustaining basis, the records showing that the net earnings of the bureau for 1918 amounted to ₱722,417.58, as against ₱170,335.11 for 1917.

During the year a parcel-post convention was concluded between the Government of the Philippine Islands and that of North Borneo. A similar convention was concluded between the United States and the Portuguese colonies of Macao and Timor, in which the Philippine Islands has the privilege of participating. Another similar convention is pending between Japan and the Philippines.

BUREAU OF SUPPLY.

Mr. Charles H. Magee, the purchasing agent, was granted an extended leave of absence from June 9, 1918, to June 7, 1919, and since January 10, 1918, Mr. Cipriano E. Unson has been in charge of the bureau as acting purchasing agent.

During the year, despite unfavorable commercial conditions then prevailing, the volume of work handled by the bureau was the greatest ever recorded. Combined purchases and sales amounted to ₱25,506,217.63, making an increase of ₱6,595,327.15 over that of 1917.

BUREAU OF COAST AND GEODETIC SURVEY.

With the exception of the director, who, in conformity to law, has always been an American, being an officer of the United States Coast and Geodetic Survey, the personnel of the bureau has been entirely Filipino since 1917, numbering 26 in all.

In general this bureau was greatly handicapped in the operations throughout the year owing to the increased cost of supplies and the transfer of the officers of the United States Coast and Geodetic Survey to active service with the Army and Navy.

The undersigned was granted leave of absence to visit the United States, and left the Philippines December 9, 1918. Vice Gov. Charles E. Yeater acted as Governor General from that date until the return of the undersigned on August 27, 1919.

Respectfully submitted.

FRANCIS BURTON HARRISON,
Governor General.

The SECRETARY OF WAR,
Washington, D. C.

EXHIBIT A.

REPORT OF NATIONAL COAL CO.

MANILA, September 13, 1919.

TO THE STOCKHOLDERS OF THE NATIONAL COAL CO.,
Manila, P. I.

GENTLEMEN: On behalf of your board of directors, and pursuant to section 3 of Article V of the by-laws, the undersigned has the honor to submit for your consideration a report and financial statement of the National Coal Co. during the fiscal year 1918-19.

Personnel.—In the fiscal year covered by the present report we had to overcome the same difficulties that we had been struggling against during the previous year.

On January 1, 1919, we accepted the resignation of Mr. C. H. French as general manager, and it was not until March 1 of the same year that we were able to secure the services of Mr. Russell, who is at present holding said office.

On June 1, 1919, the resignation of Mr. H. I. Shoemaker, the engineer, was accepted, and in his stead Mr. E. J. Hulsema was appointed as engineer of the Sibuguey district, Malangas, Zamboanga.

During the war it was absolutely impossible to secure the services of a mining engineer from the United States, and only a month ago it was possible to engage Mr. Frank Dalburg, who ought to arrive at Manila within a few days.

Amendment to the law creating the National Coal Co.—Act No. 2822 of the Fourth Philippine Legislature amended sections 2, 4, and 6 of act No. 2705, entitled "An act to create the National Coal Co.," in the sense of granting to said company priority of rights to obtain forest products for its own use and of directing the Governor General to subscribe on behalf of the government of the Philippine Islands at least 51 per cent of the company's capital stock.

Financial status.—On May 19, 1919, his excellency the Governor General subscribed 14,509 shares, which, added to the 15 300 shares subscribed on March 22, 1917, make up a total of 29,809 shares pertaining to the government of the Philippine Islands, out of the 30,000 shares issued pursuant to the law creating the company.

Herewith are inserted schedules which illustrate the status of the company's capital stock, its assets and liabilities as of June 30, 1919, and its operation during the fiscal year 1918-19.

Schedule showing the status of capital stock as of June 30, 1919.

Subscribers.	Number of shares.	Capital percentage.	Amount.	Paid.	Unpaid.
Government of the Philippine Islands.....	29,809	99.33 1/3	P2,980,800	P1,820,180	P1,160,720
Public (24 persons).....	189		18,900	13,020	5,080
Total subscribed capital stock.....	29,998	99.99 1/3	2,999,700	1,834,000	1,165,700
Unsubscribed capital stock.....	2		200		200
Total.....	30,000	100 00	3,000,000	1,834,000	1,166,000

Statement showing the subscriptions to the capital on June 30, 1919.

Shareholders.	Number of shares.	Amount.	Amount paid on subscriptions.	Balance unpaid.
The government of the Philippine Islands.....	29,809	₱2,980,900	₱1,820,180	₱1,160,720
Vicente Madrigal.....	1	100	100	.....
C. H. French.....	1	100	100	.....
Rafael Corpus.....	1	100	100	.....
Milton E. Springer.....	1	100	100	.....
Dalmacio Costas.....	1	100	100	.....
Eleuterio E. Matute.....	4	400	400	.....
Anselmo Hilario.....	10	1,000	1,000	.....
Alfonso Mafalac.....	1	100	100	.....
Alejandro Ruiz.....	1	100	50	50
Pedro Lozada.....	5	500	500	.....
Felix S. Salas Rodriguez.....	10	1,000	1,000	.....
Domingo M. Nieto.....	10	1,000	1,000	.....
Manuel de la Rama Could.....	2	200	200	.....
Cornelia de la Victoria de la Rama.....	2	200	200	.....
R. de la Rama Could.....	1	100	100	.....
Pablo B. Herrera.....	1	100	100	.....
Placido Flores.....	1	100	100	.....
E. de la Rama Could.....	1	100	100	.....
Esteban Respall Could.....	1	100	100	.....
M. Could de la Rama.....	1	100	100	.....
E. J. Haborer.....	100	10,000	5,000	5,000
Rosalía Enage.....	1	100	70	30
P. J. Moore.....	20	2,000	2,000	.....
Hilton Carson.....	10	1,000	1,000	.....
Fortunata R. Salas.....	2	200	200	.....
Total.....	29,998	2,999,800	1,834,000	1,165,800

Consolidated balance sheet as of June 30, 1919.

Fixed assets: Cost of mine development, buildings, machinery, improvements, equipments, etc.....	₱371,722.30
Constructions in progress: Cost of constructions projects.....	639,383.89
Subscriptions to capital stocks: Balance of unpaid subscriptions to capital stock.....	1,165,800.00
Working assets: Materials and supplies, advance, and prepayments.....	192,216.45
Current assets (other than cash): Merchandise and coal inventories, accounts receivable.....	62,006.01
Cash: On hand, in banks, and branches.....	145,360.58
Suspense debits: Investigation and exploration and organization expenses.....	504,807.28
	<u>3,080,796.51</u>

LIABILITIES.

Capital:	
Capital stock authorized.....	₱3,000,000.00
Less unissued and unsubscribed stocks.....	200.00
Capital stock subscribed.....	2,999,800.00
Current liabilities: Accounts payable, depository creditors, and unpaid wages.....	80,996.51
	<u>3,080,796.51</u>

Consolidated balance sheet as of June 30, 1919, compared with June 30, 1918.

Items.	June 30, 1919.	June 30, 1918.	Increase (+), decrease (-).
ASSETS.			
Real property:			
Buildings and structures.....	₱11,262.30	₱3,417.16	+ ₱7,845.14
Telephone lines.....	8,821.51	.....	+ 8,821.51
Mine development.....	55,948.59	.....	+ 55,948.59
Farms and gardens.....	1,683.88	.....	+ 1,683.88
Total real property.....	77,716.28	3,417.16	+ 74,299.12
Equipment:			
Locomotives and cars.....	11,877.09	11,036.47	+ 840.62
Watercraft and appurtenances.....	155,715.47	62,259.07	+ 93,456.40
Power plants and machinery.....	41,885.50	18,228.92	+ 23,656.58
Instruments, tools, and implements.....	28,947.35	8,532.83	+ 20,414.52
Office and domestic equipment.....	35,846.28	6,418.82	+ 29,427.46
Miscellaneous equipment.....	19,734.33	17,760.15	+ 1,974.18
Total equipment.....	294,006.02	124,234.26	+ 169,771.76
Working assets:			
Construction work in process.....	639,383.89	.....	+ 639,383.89
Materials and supplies.....	113,714.39	15,559.64	+ 98,154.75
Advances to contract employees.....	12,264.73	2,205.03	+ 10,059.70
Prepayments.....	66,237.33	24,721.82	+ 41,515.51
Total working assets.....	831,600.34	42,486.49	+ 789,113.85
Current assets (other than cash):			
Stores merchandise.....	25,657.45	18,258.04	+ 7,399.41
Coal inventory.....	19,859.64	.....	+ 19,859.64
Stock subscriptions.....	1,165,800.00	926,720.00	+ 239,080.00
Accounts receivable.....	16,488.92	.....	+ 16,488.92
Total current assets (other than cash).....	1,227,806.01	944,978.04	+ 282,827.97
Current assets (cash):			
Philippine National Bank.....	62,874.74	59,187.07	+ 3,687.67
Treasury cash.....	4,278.05	234,473.06	- 230,195.01
Cashiers' accounts current.....	59,974.95	.....	+ 59,974.95
Disbursing agents' advances.....	10,992.95	1,400.12	+ 9,592.83
Cash in transit.....	7,239.89	4,125.10	+ 3,114.79
Total current assets (cash).....	145,380.58	299,185.35	- 153,804.77
Suspense debits:			
Investigation and exploration.....	504,307.28	147,115.19	+ 357,192.09
Total all assets.....	3,080,796.51	1,561,416.49	+ 1,519,380.02
CAPITAL AND LIABILITIES.			
Capital:			
Capital stock authorized.....	3,000,000.00	3,000,000.00	.....
Less capital stock unissued.....	200.00	1,457,100.00	+ 1,456,900.00
Capital stock subscribed.....	2,999,800.00	1,542,900.00	+ 1,456,900.00
Current liabilities:			
Accounts payable.....	43,465.92	18,516.49	+ 24,949.43
Depository creditors.....	1,017.41	.....	+ 1,017.41
Unclaimed wages and accrued pay roll.....	36,512.18	.....	+ 36,512.18
Total current liabilities.....	80,995.51	18,516.49	+ 62,480.02
Total capital and liabilities.....	3,080,796.51	1,561,416.49	+ 1,519,380.02

Detailed balance sheet, June 30, 1919.

Accounts.	Central office.	Sibuguey district.	Cebu district.	Total.
ASSETS.				
Real property:				
Buildings and structures.....		P10,527.16	P735.14	P11,262.30
Telegraph, telephone, and cable lines.....		6,250.74	2,570.77	8,821.51
Mine development.....		34,721.85	21,228.74	55,948.59
Farms and gardens.....		1,683.88		1,683.88
Total real property.....		53,183.63	24,532.65	77,716.28
Equipment:				
Locomotives and cars.....		11,036.47	840.62	11,877.09
Watercraft and appurtenances.....		155,715.47		155,715.47
Power plants and machinery.....		37,885.50	4,000.00	41,885.50
Instruments, tools, and implements.....		23,323.45	5,530.33	28,853.78
Office and domestic equipment.....		23,462.15	5,092.24	28,554.39
Miscellaneous equipment.....		8,464.12	7,399.56	15,863.68
Total equipment.....		259,887.16	22,862.75	282,749.91
Working assets:				
Construction work in process.....		528,987.86	110,396.03	639,383.89
Materials and supplies.....		91,035.38	19,755.86	110,791.24
Advances to contract employees.....		12,222.73	42.00	12,264.73
Prepayments.....		63,248.26	2,371.60	65,619.86
Total working assets.....		695,494.23	132,565.49	828,059.72
Current assets (other than cash):				
Stores merchandise.....		25,657.45		25,657.45
Coal inventory.....		1,461.87	18,397.77	19,859.64
Stock subscriptions.....		1,641.05	14,847.87	16,488.92
Accounts receivable.....				
Total current assets (other than cash)....		28,760.37	33,245.64	62,006.01
Current assets (cash):				
Philippine National Bank—Zamboanga warrant account.....		53,860.84		53,860.84
Philippine National Bank—Cebu warrant account.....			1,312.11	1,312.11
Philippine National Bank—Manila warrant account.....				
Treasury cash.....		7,701.79		7,701.79
Cashiers' accounts current.....		4,278.05		4,278.05
Fishers' agents' advances.....		35,501.47	24,473.48	59,974.95
		6,652.95	3,840.00	10,492.95
Total current assets (cash).....		96,015.26	29,625.59	125,640.85
Interdepartmental accounts current (see contra).....		2,195.77	17,163.90	19,359.67
Suspense debits:				
Investigation and exploration account.....		95,476.94	(18,914.01)	76,562.93
Organization account.....			1,829.55	1,829.55
Funds and property in transit.....		7,239.89		7,239.89
Total suspense debits.....		102,716.83	(17,084.46)	85,632.37
Total assets.....		1,568,691.11	242,911.58	1,811,602.69
LIABILITIES.				
Capital stock:				
Capital stock authorized.....		3,000,000.00		3,000,000.00
Capital stock unissued.....		(200.00)		(200.00)
Total capital stock subscribed.....		2,999,800.00		2,999,800.00
Interdepartmental accounts current (see contra).....		1,490,873.51	241,767.29	1,732,640.80
Current liabilities:				
Accounts payable.....		40,965.47	465.81	41,431.28
Depository creditors.....		597.56	419.85	1,017.41
Pay-roll account.....		36,254.57	36.00	36,290.57
Unclaimed wages.....			222.61	222.61
Total current liabilities.....		77,817.60	743.27	78,560.87
Total liabilities.....		1,568,691.11	242,911.56	1,811,602.67

Statement showing the sources of funds and their applications.

FROM JULY 1, 1918, TO JUNE 30, 1919.

Sources of funds:	
Cash on hand—June 30, 1919.....	₱295,060.25
Prepayments (cash in transit).....	4,125.10
Collections from stock subscriptions.....	1,217,820.00
From 1917-18 subscriptions.....	₱926,640.00
From 1918-19 subscriptions.....	291,180.00
Accounts payable.....	62,480.02
Total.....	1,579,485.37

Applications of funds:	
Investments—	
Real property.....	₱74,299.12
Equipment.....	169,771.76
Working assets.....	789,113.85
Current assets (other than cash).....	43,747.97
	1,076,932.70
Cash in treasury, banks, and in hands of officers.....	145,360.58
Expenditure—Investigation and exploration.....	357,192.09
Total.....	1,579,485.37

FROM MARCH, 1917, TO JUNE 30, 1919.

Sources of funds:	
Collections for stock subscriptions.....	1,834,000.00
In 1917-18.....	₱616,180.00
In 1918-19.....	1,217,820.00
Accounts payable, June 30, 1919.....	80,996.51
Total.....	1,914,996.51

Applications of funds:	
Investments—	
Real property.....	₱77,716.28
Equipment.....	294,006.02
Working assets.....	831,600.34
Current assets (other than cash).....	62,006.01
	1,265,328.65
Cash in treasury, banks, and in hands of officers.....	145,360.58
Expenditure—Investigation and exploration.....	504,307.28
Total.....	1,914,996.51

Ratio of investments and expenditures during the fiscal year 1918-19 to capital stock and resources.

Investments and expenditures.	Amount invested.	Capital authorized, ₱3,000,000.	Capital subscribed, ₱2,999,800	Capital paid up, ₱1,834,000.	Resources in 1918-19. ₱1,579,485.37.
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Real property.....	₱74,299.12	2.4766	2.4768	4.0473	4.7040
Equipment.....	169,771.76	5.6590	5.6590	9.2569	10.7485
Working assets.....	789,113.85	26.3038	26.3055	43.0269	49.9602
Current assets (other than cash).....	43,747.97	1.4583	1.4583	2.3853	2.7697
Total investments.....	1,076,932.70	35.8977	35.8996	58.7164	68.1824
Investigation and exploration.....	357,192.09	11.9064	11.9072	19.4761	22.6145
Cash on hand.....	145,360.58				9.2031
Total.....	1,579,485.37	47.8041	47.8068	78.1925	100.0000

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Ratio of investments and expenditures as of June 30, 1919, to capital stock and resources.

Investments and expenditures.	Amount invested.	Capital authorized, ₱3,000,000.	Capital subscribed, ₱2,999,800.	Capital paid up, ₱1,834,000.	Total resources, June 30, 1919. ₱1,914,996.51.
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Real property.....	₱77,716.28	2.5905	2.5907	4.2375	4.0583
Equipment.....	294,006.02	9.8002	9.8008	16.0808	15.3528
Working assets.....	831,600.34	27.7200	27.7218	45.3435	43.4258
Current assets (other than cash).....	62,008.01	2.0669	2.0670	3.3809	3.2379
Total investments.....	1,265,328.65	42.1776	42.1803	68.9927	66.0748
Investigation and exploration.....	504,307.28	16.8102	16.8114	27.4977	26.3346
Cash on hand.....	145,360.58				7.5906
Total.....	1,914,996.51	58.9878	58.9917	96.4904	100.0000

Details of construction in process as of June 30, 1919.

Details.	Total.	Sibuguey district.	Cebu district.
Buildings and structures.....	₱192,099.85	₱189,314.29	₱2,785.56
Railway.....	323,192.30	219,765.12	107,427.18
Docks.....	11,758.32	11,758.32	
Tramway.....	19,186.15	19,186.15	
Installation of machinery.....	13,655.65	13,655.65	
Fabrication of materials.....	2,555.28	2,555.28	
Sanitary improvements and water supply.....	8,097.08	8,097.08	
Miscellaneous construction improvements.....	3,883.87	3,883.87	
General engineering expenses.....	51,185.66	51,185.66	
	625,624.16	515,411.42	110,212.74
Maintenance and repairs.....	5,875.63	5,692.34	183.29
Shop expenses.....	7,884.10	7,884.10	
Total carried to balance sheet.....	639,383.89	528,987.86	110,396.03

Schedule of constructions in progress as of June 30, 1919.

	Total.	Sibuguey district.	Cebu district.
Construction projects:			
Salaries.....	₱38,476.95	₱33,870.88	₱4,606.07
Wages.....	198,088.03	130,609.20	67,478.83
Subsistence of laborers.....	72,662.69	72,662.69	
Recruiting expense.....	35,915.81	35,908.45	7.36
Health and sanitation.....	19,657.58	19,301.62	355.93
Consumption of material and supplies.....	178,884.66	158,672.11	20,212.55
Rentals.....	56.13		56.13
Postage and telegrams.....	136.14	136.14	
Travel expense.....	2,083.42	1,941.26	142.16
Company's launch service.....	8,582.16	8,582.16	
Freight contracts.....	2,395.92	401.90	1,994.02
Construction contracts.....	44,880.54	44,880.54	
Repair contracts.....	4.00		4.00
Taxes.....	314.60	314.60	
Surveying and drafting.....	5,079.46		5,079.46
Power plant expense.....	994.95	994.95	
District accounting.....	5,811.70	4,347.52	1,464.18
District administration.....	17,579.02	8,229.61	9,349.41
Miscellaneous service.....	1,886.46	92.02	1,794.44
General district expense.....	7,935.17	6,961.06	974.11
Total construction projects.....	641,425.36	527,906.71	113,518.65
Maintenance and repairs (construction).....	5,875.63	5,692.34	183.29
Shop expense (construction).....	7,884.10	7,884.10	
	655,185.09	541,483.15	113,701.94
Less completed constructions transferred to fixed assets accounts.....	15,801.20	12,495.29	3,305.91
Total carried to balance sheet.....	639,383.89	528,987.86	110,396.03

Schedule of suspense debits as of June 30, 1919.

	Total.	Central office.	Sibuguey district.	Cebu district.
Investigation and exploration:				
Expenses during the year ended June 30, 1919.....	P363,755.94	P48,684.11	P315,071.83	
Operation of S. S. Mayo.....	16,393.57		16,393.57	
Total for the year ended June 30, 1919.....	380,149.51	48,684.11	331,465.40	
Deduct district earnings (see operating statements).....	24,786.97		3,814.63	P20,972.34
	355,362.54	48,684.11	327,650.77	(20,972.34)
Organization expenses: Cebu district.....	1,829.55			1,829.55
Net total for the year ended June 30, 1919..	357,192.09	48,684.11	327,650.77	(19,142.79)
Add balance June 30, 1918.....	147,115.19	46,792.83	98,264.03	2,058.33
Total carried to balance sheet.....	504,307.28	95,476.94	425,914.80	(17,084.46)

Cebu district operating account for the year ended June 30, 1919.

Coal sales.....		P101,679.02
Less—Cost of coal sold:		
Mine operation—		
Mining.....	P84,192.47	
Loading and hauling.....	4,244.66	
General mine expense.....	927.67	
	P89,364.80	
Deduct—Coal inventory.....	18,397.77	
		70,967.03
Gross earnings from coal sales.....		30,711.99
Add—Miscellaneous revenues:		
Operation of S. S. Mayo.....	882.24	
Miscellaneous income.....	18.05	
		900.29
		31,612.28
Deduct—Expenses:		
Coal merchandising expense.....	10,225.01	
General accounting expense.....	70.85	
General administration.....	296.74	
Extraordinary charges.....	47.34	
		10,639.94
Net earnings carried to investigation and exploration account....		20,972.34

Sibuguey district merchandise store and miscellaneous revenue account for the year ended June 30, 1919.

Merchandise sales.....	P119,093.76
Less—Cost of merchandise sold.....	105,308.23
Gross earnings on merchandise sales.....	13,785.53
Add—Miscellaneous income.....	1,518.97
	15,304.50
Deduct—Expenses—	
Salaries.....	P5,822.57
Wages.....	469.50
Materials and supplies used.....	211.01
Travel expense.....	94.49
Freight contracts.....	21.12
Taxes.....	697.21
Health and sanitation.....	38.94
Company launch service.....	2,227.06

Deduct—Expenses—Continued.

Subsistence of laborers.....	₱170. 76
District accounting.....	18. 19
Extraordinary charges.....	1, 719. 02
	₱11, 489. 87

Net earnings carried to investigation and exploration account..... 3, 814. 63

Sibuguey district.—The development of the Sibuguey coal field was decided upon after a careful study of the meager data available regarding all Philippine coals. Coal from the Sibuguey region seems to have none of the unfavorable qualities of that produced in other Philippine localities, and a large quantity of it exists in the Gotas-Butong district. Whether this coal can be mined economically can not be determined as yet. Among the maps accompanying this report there is attached a study of the J. G. White coal claims in Danao, Cebu Province. This study was made by a competent engineer at a very considerable expense, rumored to have been about ₱75,000. Attention is invited to this report in order to give an idea as to the extensive work required in really exploring a coal field. Had similar work been carried out in Mindanao over the very large area that is being considered there, at least three years' time would have been required as well as a very large amount of money.

The area of the Sibuguey coal field is so great that the relatively small amount of exploration and development work accomplished is hardly sufficient to warrant a statement as to the quantity of coal available. It seems that a blanket vein of coal once covered the entire peninsula, but has been lost to a very large extent through erosion. Large areas not yet disturbed by erosion still exist, and in the Butong-Gotas region there is good evidence of a continuous 5-foot vein over an area of about 2,000 hectares, which means about 30,000,000 tons of coal. No. 2 vein has been discovered by drilling at a depth of about 80 feet below the surface in Butong. This vein is 14 feet thick. A coal outcrop that may be the No. 2 vein is found at a distance of 4 kilometers from Butong in the Lumbug region. If this No. 2 vein is to be found over the whole region, the quantity of coal available is immense.

The quality of the coal is best shown by the reports of samples analyzed recently. Representative analyses of Australian, Chinese, and Japanese coal are included for comparative purposes.

Report of coal analyses.

	Karatsu, Japan.	Chin- wan-tai, North China.	New Castle, Aus- tralia.	Gotas River, seam No. 14.	Camp Butong, Lumbug Creek seam.
Moisture.....per cent..	5 10	2 50	2 29	1 54	2 14
Volatile combustible matter.....do....	36 83	34 35	33 39	26 83	14. 13
Fixed carbon.....do....	49 25	50 99	53 78	65 78	80. 69
Ash.....do....	10 82	12. 16	10. 54	5. 73	3. 04
Sulphur (determined separately).....do....				93	96
Cokine quality.....	Non- coking.	Non- coking.	Non- coking.	Coking	Non- coking.
Total calories.....	6, 909	7, 029	7, 028	8, 231	8, 301
Total British thermal units.....	12, 545	12, 652	12, 650	14, 816	14, 942

The original idea as to the development of the Sibuguey district called for a port at Payao on the west coast of Sibuguey Peninsula. It has been the intention of the management to utilize the Sibuguey River, which empties into Sibuguey Bay about 3 miles north of Payao, as a means of transportation while the coal fields were being explored, and also, in so far as possible, as a means of transporting coal to tidewater. By clearing out the river the company was able to transport their equipment and supplies inland as far as Gotas, where the more extensive development work has been carried out. From Gotas it is about 3½ kilometers by trail across a small range of hills to Butong, which is apparently the best possible location for a permanent mine. While the Sibuguey River could be used for transporting supplies inland it was not possible to use

it to transport coal to market in commercial quantities. For the past year, the company could have marketed as much as 50 tons of coal daily if transportation facilities from the mine to the coast had existed.

As soon as it developed that Butong was the most advantageous location for the mine, it was decided to provide a railroad for transporting the product to the coast as soon as possible. Malangas, on the east coast of the peninsula, was selected as the best site for the water terminal of the railroad. In December, 1918, a start was made toward transferring Payao headquarters to Malangas. By February of this year, practically all of the work at Payao had been abandoned and all the energies of the company's forces were concentrated in the construction of the Malangas-Butong Railroad. Arrangements were made in January for recruiting 2,000 laborers for construction and it was hoped that the railroad might be finished by September or October of this year. Laborers were furnished transportation for themselves and families and paid at the rate of ₱1 a day with subsistence. Single laborers are fed at the mess, while married men are furnished a ration of meat and rice. The subsistence costs about ₱0.40 per day per man.

There will be a set of coal bunkers at Malangas at the wharf and the necessary coal-handling machinery to load ships rapidly and economically. By the proposed railroad, it is about 11½ kilometers from Malangas to Butong, but on additional kilometer and a half of rail will be required at Malangas as a material track from the proposed wharf to the lines which connect to the coal bunkers. A timber wharf will be constructed at first with about 25 feet of water alongside at low tide. This will be replaced in the future with a concrete wharf with 30 feet of water.

The grading for the railroad has been completed as far as kilometer 6 and considerable clearing has been carried on beyond this point. About 50 per cent of the ties required have been purchased, and timber contractors are busy on the remainder of the order. A construction tramway is being laid from Malangas to Butong and considerable coal can be taken out over this line before the railroad is completed. The severe epidemic of malaria and the time lost in obtaining equipment from the United States have been the principal difficulties that have been encountered. In order to give a general idea of the time required to secure equipment, a list is given below showing the date that some of our orders were placed and the date they were received. Not only have the shipments been extremely slow, but they have been incomplete, the missing cases usually being the most necessary part of the consignment. Note that, out of eight items, two have not arrived at all and three are incomplete.

Item.	Date ordered.	Date received.	Remarks.
Wireless.....	June 19, 1918	Dec. 7, 1918	Short generator.
Diamond drill No. 1.....	Aug. 14, 1918	May 15, 1919	About 33 per cent short.
Track scales.....	Dec. 10, 1918	Sept. 6, 1919	Complete.
Railway spikes.....	Dec. 24, 1918	July 8, 1919	Do.
150 tons rails.....	Dec. 10, 1918	Aug. 27, 1919	Short bolts and splices.
Diamond drill No. 2.....	Dec. 17, 1918	July 8, 1919	Complete.
Locomotive.....	Dec. 10, 1918	Not yet received.	
25 cars.....	.....do.....	.....do.....	

The town of Malangas as it exists to-day consists of about 20 family quarters for employees, 2 mess houses for employees, a considerable number of temporary hospital buildings, a school, constabulary barracks, several large barracks for laborers, and about 100 detached houses for laborers and their families. A gravity waterworks has been installed and there is a cinematograph, bakery, a 2-ton ice and refrigerating plant, and a small machine shop. A large area is being cultivated as a kitchen garden, where considerable success is being had in the production of vegetables for laborers' rations.

Health conditions.—As is usual in a new country, the health conditions on the average have been very bad. The mining camps at Butong and Gotas have been constructed with the idea of protecting the laborers from malaria. The houses are screened and all employees are provided with mosquito nets and suitable bedding. Here the general health has been fair, the percentage of sickness not being great enough to interfere with the work. When construction first started at Malangas there were no mosquitos in evidence, and the

camp has continued to this date without going to the expense of mosquito protection. A construction camp was built about 1 kilometer from the coast, where it was thought conditions would be as good as Malangas. From the time the work started in this camp cases of malaria appeared occasionally, but it was not until about 1,200 men were sent to the camp to reside that a serious outbreak occurred. Very shortly after the camp was occupied about 900 of the men became sick with malaria. Conditions were so serious that the camp was abandoned, the laborers returning to Malangas. Hospital facilities were very meager, and until the proper temporary buildings could be constructed conditions were extremely unfavorable. Two thousand men have been recruited, mostly in Cebu and Siquijor, and sent to Malangas at an expense of about ₱40 each. Of this 2,000 men, about 600 broke their contract and escaped, largely on account of fear of malaria, 900 became sick, of whom 300 died; 600, or practically all of those who contracted the malaria, had to be sent back to their homes because they were physically unfit for work. The management estimates that about ₱50,000 of the money spent for recruiting was lost, due to the laborers' inability to render any service to the company, and at least ₱80,000 was spent in medical attendance, burial expenses, and traveling expenses of those who were returned home. It was necessary to establish a receiving station in Cebu, where the convalescents were kept on their way from Malangas to their homes. The health authorities required this temporary hospital to prevent the spread of malaria in Cebu Province.

The actual money spent on account of the epidemic described above will probably reach the total of ₱150,000, but it must be borne in mind that this sum represents only a small part of the real damage suffered. The completion of the work was delayed by at least five months, which means a big loss on overhead charges as well as a chance of loss due to a possible drop in the price of coal. Future labor recruiting will be difficult and expensive, in fact it would be almost impossible to obtain another 2,000 men within a reasonable time. It is believed that no further trouble need be expected from similar epidemics in Sibuguey, but if it is found that malaria still exists, a very large expenditure will be required in mosquito extermination. Such operations call for extensive drainage and clearing large areas of all trees, brush, and even cogon grass. On account of the dense growth about all the camps in Sibuguey, such work would cost an immense sum.

The following is a general summary of the important features of the work in Mindanao during the past fiscal year. The construction camp and headquarters were moved from Payao to Malangas. It being impossible to market coal without a means of transportation, the construction of a railroad was started from Malangas to Butong. This work is 50 per cent completed, all the material and rolling stock has been ordered and should be in Manila by October 20. The railroad should be completed and in operation by March 1, 1920. From that date, the company should market 50 tons of coal a day with a gradual increase to a large production. Making due allowance for writing off the cost of the development work, the coal should not cost over 10 pesos a ton on the wharf in Malangas.

Cebu district.—The operations in Cebu have been less extensive but more productive than those carried on in Mindanao. The property locally known as the "Coto Angeles" has been taken over from the owners and due to the cheap labor in Cebu has produced coal almost from the very beginning. This property has been known for a long time and various attempts to exploit the mines have been made. In 1871, Don Isaac Conui obtained a concession from the Spanish Government and did considerable work on the claims. Before abandoning the property, he produced 1,600 tons of coal which he sold to the Spanish gunboats operating out of Cebu Harbor. In 1891, Don Ramón Montanes obtained control of the property and constructed a tramway from the mines to Compostela together with a wharf for loading purposes. He produced about 6,000 tons of coal before the revolution of 1898 stopped the work.

The completed work in Cebu will consist of an extension of the Philippine Railway to the barrio of Basac, a distance of about 7 kilometers. An aerial cableway 4 kilometers long will be installed from Basac to the mines. The original plan called for a narrow-gauge railroad instead of the aerial cableway. The idea of constructing a narrow-gauge road was abandoned in order to avoid excessive construction and maintenance expenses. It is estimated that the total cost of the completed transportation system in Cebu, together with the necessary mine development work, will be less than ₱500,000. During the fiscal year the

company has produced over ₱100,000 worth of coal in Cebu, which has been sold at an average of ₱35 per ton. The mining costs only have averaged ₱6.41 per ton for the coal produced and that blocked out in the mine ready for production. The transportation cost on the completed system will be less than ₱2 per ton from the mine to Cebu, although it has cost over ₱20 per ton by the cargador system used at present.

Health conditions in Cebu have been excellent. Labor has been cheap and plentiful, the supervision has been reduced to a very small percentage of the total cost, and in consequence the railroad grade has been completed with very creditable economy. Mr. Regner, the district agent, should be congratulated for the good results that he has obtained. The railroad track should reach Basac by October 1, and it will require a very short time to complete the aerial cable. We should be able to haul coal from Licos to Cebu over the completed transportation system during the month of November.

The quantity of coal available at Licos is small from a mining standpoint, probably less than 4,000,000 tons. It is quite probable that the supply will be exhausted within a few years. For this reason every effort should be made to secure additional coal lands in Cebu if we desire to continue operations there.

Respectfully submitted.

THE BOARD OF DIRECTORS,
By C. H. FRENCH,
Vice President.

REPORT OF THE SECRETARY OF THE INTERIOR.

JANUARY 1 TO DECEMBER 31, 1918.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS,
DEPARTMENT OF THE INTERIOR,
Manila, July 8, 1919.

SIR: I have the honor respectfully to submit the following report of the operations of the department of the interior for the year ending December 31, 1918.

A. ORGANIZATION.

This is the second annual report of the department of the interior since the reorganization of the executive departments of the Government pursuant to the provisions of Act No. 2666 of the Philippine Legislature. The organization of the department has not suffered any material change. The same bureaus and offices which were under its executive control and supervision in 1917 have remained under its jurisdiction in 1918, with the exception of the charity wards, which have been taken over by the bureau of health, and the board of pharmaceutical examiners, which has been reorganized and thereafter named the board or pharmaceutical examiners and inspectors. A new board of examiners, known as the board of optical examiners, has been created, while the welfare board has been reorganized and placed under the department of the interior. Then there are other functions and duties enjoined upon it by different legislation, appropriate mention of which and of the works done thereunder is elsewhere made in this report.

It may be seen, therefore, that at the end of the year 1918, the department of the interior had executive control and supervision over the following bureaus and offices:

1. Executive bureau.
2. Bureau of non-Christian tribes.
3. Bureau of constabulary.
4. Philippine General Hospital.
5. Government orphanage.
6. Board of pharmaceutical examiners and inspectors.
7. Board of medical examiners.
8. Board of dental examiners.
9. Board of optical examiners.
10. Welfare board.
11. City of Manila.
12. City of Baguio.

The operations and activities of each of the foregoing bureaus and offices are described in their respective reports, which are forwarded herewith, and no attempt will be made to go fully into the details of the work done by such bureaus and offices.

B. PERSONNEL.

Hon. Rafael Palma has continued to act as secretary of the department and Hon. Teodoro M. Kalaw as undersecretary. The subordinate personnel has remained the same as last year, except that a new clerk has been added.

Under the provisions of the reorganization act "there shall be in each department an undersecretary, who shall perform such duties as may be assigned to him by the secretary of the department and such as may be imposed upon him by law. When a department secretary is unable to perform his duties owing

to illness, absence, or other cause, or in case of a vacancy in the office, the respective undersecretary shall temporarily perform the duties of said office."

It often happens, however, that both the secretary and undersecretary of a department are absent, and, as may be noted, the law does not provide a method for designating any other official who may temporarily perform the functions and duties thereof. To remedy this and the other defects found in the reorganization of the executive departments, Act. No. 2803 was enacted. This act provides, among other things, for the appointment of one or more undersecretaries for each department as the annual appropriation acts may authorize, and empowers the Governor General to designate the secretary or undersecretary of any department to take charge of another department whose secretary or undersecretaries are unable to perform the duties of the office owing to illness, absence, or other cause.

C. POLICY.

The policy of the department as outlined in its last annual report has been strictly adhered to and no material change has been introduced except that during the year there has been an accentuation of the work of cooperation with the other departments especially in connection with the rice crisis and the food production campaign, the problem of transportation, and the health and school problems. Then there has also been taken further steps in connection with our policy toward the betterment of non-Christian people. Aside from the policy of compulsory school attendance, the department has heretofore favored the policy of compulsory fixed residence for our backward inhabitants irrespective of age. But experience has shown that it is futile to attempt to solve the non-Christian problem by such a method. It is indeed very doubtful for a mature non-Christian accustomed to the entirely untrammelled habits of nomadic or seminomadic life to survive compulsory change to orderly life with fixed place of habitation and the exactions of more or less systematic field labor. There are doubtless individual instances in which this has been accomplished, but we must deal with the general rule of the mass rather than the individual exception. Furthermore, if it be possible to accomplish successfully such transformation by groups of mature men and women, experience has shown that it can not be done by personnel such as the Government is ordinarily able to secure and retain. The solution, therefore, of our problem of amalgamating the wild non-Christians must be sought by a method which from time immemorial has been successful in the domestication of both men and beasts; that method of course is by bringing them very young into the environment which simulates as nearly as possible that which is intended to be the habit of subsequent mature life.

D. LEGISLATION.

As has been stated in the chapter dealing with organization, there are other functions and duties enjoined upon the department of the interior by different legislation. To get a clear idea of those functions and duties and in order to be able to make a survey of the works done thereunder, it is deemed proper to enumerate the legislation in question.

Act No. 2715, "the militia act." While this act was enacted and approved on March 17, 1917, and the first organization of the Philippine Militia took place in that year, yet the year 1918 saw much of the activities of the organization especially in connection with the offer to the United States for service during the war of a contingent of 25,000 Filipino militiamen. Properly speaking, the Philippine Militia is not a part of the department of the interior, but the secretary of the interior has been the chairman of the militia commission since the operation of the law, and this makes mention thereof advisable.

Act No. 2723, an act providing for the adoption of necessary and efficacious measures for increasing the agricultural production of foodstuffs and appropriating funds for this purpose. This act was enacted on November 28, 1917. The intervention of the department of the interior in the work is contained in section 5 thereof, which reads as follows:

"The secretary of agriculture and natural resources is hereby authorized to issue such rules and regulations as may be necessary to carry out the purpose of this act and, on the petition of a majority of the provincial boards of the Provinces regularly organized under the provisions of the provincial government act, and in case of such petition being approved by the secretary of the

interior, he may issue an order which shall be as general as possible within each Province, fixing the minimum quantity of foodstuffs that each family or individual must produce within a given period * * *."

During the year 1918 no action has ever been taken under the above-quoted provisions of law.

Act No. 2725, an act authorizing the secretary of the interior to establish a school of nursing in the southern island hospital division, as a dependency of the School of Nursing of the Philippine General Hospital, and for other purposes. This act was enacted on December 18, 1917. Pursuant to the authority vested in the secretary of the interior by the above-cited act, this office on January 9, 1918, issued Department Order No. 13, establishing a school of nursing in the southern island hospital division, subject and subordinate to the School of Nursing of the Philippine General Hospital.

Act No. 2727, appropriation act for the year 1918. There are numerous items in the 1918 appropriation act which pertained to the department of the interior. But mention shall be made only of those which had important bearing on the policy of the department.

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|---|---------|
| (a) Discretionary expenses of the secretary of the interior for such purposes as he may consider necessary for establishing and promoting friendly relations with the non-Christian inhabitants of the Philippine Islands and for furthering their agricultural, industrial, economic, and social development and their progress in civilization..... | P15,000 |
| (b) For special scholarship, to include cases of selected individuals whose professional training or inclination may, in the opinion of the secretary of the interior, specially tend to render permanent the complete fusion of the Christian and non-Christian elements populating the Provinces of the archipelago, etc..... | 10,000 |

Complete discussion of the work accomplished by the department under the above-mentioned items is contained in the chapter dealing with our non-Christian territory and inhabitants.

Act No. 2736, the public works act for 1918. Several items under this act were placed under the discretion of the secretary of the interior for distribution:

Non-Christian and special Provinces.

- | | |
|--|---------|
| (a) For the construction, improvement, and extension of telephone lines..... | P50,000 |
| (b) For aid to local governments in the construction of a simple type of sanitary public markets..... | 30,000 |
| (c) For the construction and improvement of public buildings and for other purposes..... | 30,000 |
| (d) For the construction, improvement, and maintenance of irrigation systems in the Mountain Province..... | 8,000 |

The above-mentioned funds were undoubtedly intended for expenditure in non-Christian Provinces, the caption "Non-Christian and special Provinces" to the contrary notwithstanding. Accordingly proper distribution thereof was made, taking into consideration the furtherance of the works for social, economic, and political advancement of the non-Christian territory and inhabitants.

Act No. 2745, amending Act. No. 2510, known as the public welfare board act, and placing said board under the executive supervision of the department of the interior. Appropriate mention of the work of this board is elsewhere made in this report.

Act No. 2753, an act authorizing provincial boards to establish and manage irrigation systems and providing funds for this purpose. The intervention of the department of the interior in this matter is confined to approving the appropriation by a provincial board for irrigation purposes of such sum not exceeding 25 per cent of its road and bridge fund. So far no provincial board has as yet taken action under this act.

Act No. 2755, an act to authorize the establishment of municipal irrigation systems, and for other purposes. Several municipalities have attempted to take advantage of this act, but no one as yet have ever been granted the benefits thereof.

Act No. 2756, an act to provide for the relief of the invalids of the Philippine revolution or wars, appropriating funds for this purpose, and for other

purposes. On February 8, 1917, the Philippine Legislature adopted Concurrent Resolution No. 8, creating a committee of six members to ascertain the number of surviving invalids of the late revolutions, their whereabouts and their means of subsistence, in order to extend relief to those in need of it. This action was prompted by the report "that there are a considerable number of invalids of the past revolutions who, having fought with loyalty, valor and unselfishness for the cause of their country and not having derived any personal profit whatsoever from said revolutions, are now living in utter destitution after having done everything possible to continue living peacefully and honorably." Acting in accordance with the report and recommendation of the committee the Philippine Legislature enacted Act No. 2756. Thereunder the secretary of the interior is charged with the duty "to decide whether or not a person is an invalid within the meaning of this act, taking into consideration the record of such person prepared by the joint committee of the legislature above referred to, and of the investigations made by the same and its several subcommittees, for which purpose, as soon as this act takes effect, the personal records of all applicants for registration in the records of invalids shall be transferred to the office of the secretary of the interior." The number of applicants registered is 363, and out of this number only 83 were declared in 1918 as invalids of the Philippine revolution. As may be noted very few were able to register as invalids, and as registration is required before a person can be declared an invalid, there seems to be a necessity for an amendment to the law in order to enable to register those who either through ignorance or failure to be duly notified were unable to do so. It is certainly hard to believe that throughout the length and breadth of the archipelago there could only be 363 supposed invalids of the past wars. In fact this office has received several applications for registration and numerous inquiries as to the possibility of registration, all of which had to be disregarded on account of the provisions of law.

Act No. 2760, an act to confirm and ratify all steps taken for the erection, maintenance, and improvement of national monuments, and particularly for the erection of a monument to the memory of Andres Bonifacio, to authorize the creation of a committee or committees for taking up popular subscriptions, and to appropriate funds therefor. Under this act "the secretary of the interior is authorized to appoint a committee or committees for the purpose of taking up popular subscriptions in such manner and subject to such conditions as said secretary of the interior may prescribe." Acting in pursuance of that authority the secretary of the interior appointed a committee in each regularly organized Province, in each specially organized Province, in the Department of Mindanao and Sulu and in each Province thereunder, and in the city of Manila. A quota of ₱25,000 was fixed for the Provinces, and the return shows an over-collection of ₱837.67.

Act No. 2762, an act providing that the board of pharmaceutical examiners shall at the same time be a pharmacy inspection board, increasing its duties, powers, and attributes, and appropriating funds for this purpose.

A summary of the work done by this board is made in another place in this report.

Act No. 2773, authorizing the municipalities of Santa Cruz and Majayjay, Laguna, and the municipality of Santa Lucia, Ilocos Sur, to issue bonds for sewers and waterworks.

Act No. 2774, amending the Manila charter as contained in the Administrative Code of 1917.

E. GENERAL STATEMENT OF CONDITIONS.

The year 1918 has been noteworthy by reason of:

1. Most satisfactory conditions of peace and public order, assuring a permanent stable government throughout the archipelago.

2. Marked advances of our Provinces and municipalities along social, political, and economic lines.

3. Noteworthy progress of our non-Christian territory and inhabitants, especially in the sense of rendering permanent their complete assimilation and fusion with the rest of the archipelago.

In summary, the state of affairs throughout the islands is most encouraging from the standpoint of the administrative undertaking of the department of the interior.

F. GENERAL OPERATION AND ACTIVITIES.

Under this heading it is proposed to discuss in general terms only the most salient features of the activities of the department.

Exercising as it does administrative supervision and control over the government of the Provinces, chartered cities, municipalities, townships, and other local political divisions, the department of the interior must necessarily assume the heavier burden of responsibility for the peace, happiness, and prosperity of the people of the islands. The preservation of peace and public order in the midst of material progress and social activities is the acid test of the ability of a people to establish a stable government of its own. Knowing this, the department of the interior is sparing no efforts to the end that the blessings of peace may forever illumine the way for greatness and prosperity. Through the constabulary and the provincial and municipal officials, the department of the interior preaches the gospel of peace and order to the people of the islands. It investigates or causes to be investigated local disturbances, traces or causes to be traced their sources or origins, and applies or causes to be applied proper remedies to prevent their recurrence. Happily the year 1918 has been a year of peace and continuing good order.

But in order that a permanent and lasting condition of peace and public order may be assured the doctrine of mutual confidence and cooperation between local officials and the people must also be preached and practiced. Thus the department of the interior, through its local officials and agents, or by frequent inspections, is making the people understand that the Government is practically of their own creation and the officials are generally of their own choosing, whom they elevate to the high posts to serve the best interest of the community. On the other hand, local officials, be they elected or appointed, are always being instructed to place public welfare over and above their personal convenience and interest, and whenever and wherever they conduct themselves adversely to this instruction they are administratively censured and punished.

To see that the policy and program of administration of the department of the interior in regard to our Provinces and municipalities is being adhered to and followed, the undersigned never fails to make annual trips of inspection. During the year 1918 the Secretary of the Interior has inspected the various Provinces, especially of Luzon. It was during those trips that he noted the great strides made by our Provinces and municipalities. An harmonious relation exists among the diverse elements populating the archipelago. Compact and united, the Filipinos are working with common purpose and for common advancement.

But it is not alone in connection with the preservation of peace and public order nor in regard to the progress of our Provinces and municipalities that the activities of the department of the interior are confined. For the purpose of his supervisory authority he promulgates or authorizes to be promulgated by department orders or by means of circulars, such rules, regulations, orders, or instructions necessary for the government of the department or for an harmonious and efficient administration of the bureaus and offices of Provinces, cities, and municipalities. During the year 1918 the department has issued 12 department orders, the most important of which are Department Order No. 13, establishing a school of nursing in the southern island hospital division, and Department Orders Nos. 19 to 22, inclusive, regarding the raising of funds for the erection of a monument to Andres Bonifacio. Then there are several important circulars issued by the department, among which are the one directing chiefs of bureaus and offices to use utmost care in the expenditure of money voted for their respective bureaus and offices to avoid the disagreeable task of applying to the emergency board or to the Philippine Legislature for an additional sum to cover any deficiencies or shortages; the one directing chiefs of bureaus and offices to furnish the department with copy of all actions taken, or decisions rendered, or correspondence had, on all important matters which may not need the approval of, or which need not be coursed through the department, and the one prescribing a procedure for the preparation of annual reports by provincial governors. Then also at the instance of the department of the interior numerous circulars have been issued by the executive bureau and the bureau of non-Christian tribes, the most important of which are the ones referring to interisland emigration of laborers for the proper distribution of labor; the ones authorizing the provinces to subscribe to the third and the fourth Liberty loans; the one intended to secure information as to the number of orphans and dependent chil-

dren in the Provinces; and the one prescribing the proper procedure for applying for licenses for firearms.

Finally, there are other matters which under the Administrative Code are required to be acted upon by the department of the interior. The most important ones are the following:

1. *Aid to insular and provincial charitable institutions and exhibition purposes.*—Under sections 2248 and 2293 of the Administrative Code, municipal councils, with the approval of the secretary of the interior, may make appropriations for aid to insular or provincial charitable institutions and exhibition purposes. Municipal appropriations made under the provisions of these two sections amounting to ₱6,085 have been approved by this office during the year 1918.

2. *Boundary disputes.*—Under section 2167 of the Administrative Code, boundary disputes between municipalities may be appealed to the department of the interior. During the year 1918 six boundary disputes have been acted upon by this office.

3. *Provincial loans to municipalities for public purposes.*—Under section 2106 (c) of the Administrative Code, provincial boards, upon approval of the department head, are authorized to appropriate money for loans to municipalities, townships, or settlements of the Province, under such conditions as to the use of the funds loaned and as to the repayment of the loans with interest, at 3 per cent per annum, as may be fixed by the provincial board. Pursuant to this section, provincial loans to municipalities amounting to ₱94,850 have been approved during 1918.

4. *Authority to exceed percentage limit for salaries and wages of municipal officials.*—Under the provisions of section 2299 of the Administrative Code of 1917, the provincial board, with the approval of the secretary of the interior, may authorize any municipality of the Province to exceed the percentage limitation upon amount expendable for salaries and wages. During the year 1918 two requests have been acted upon by this office.

5. *Payment of salaries to municipal officials during suspension.*—Under the provisions of section 2192 of the Administrative Code of 1917, a municipal official suspended from office pending investigation of the charges against him may, upon subsequent exoneration and reinstatement, be paid his salary during the period of his suspension, with the approval of the secretary of the interior. During the year 1918, 11 petitions have been received—5 denied and 2 granted, while the rest are still pending consideration.

6. *Condemnation proceedings and closing or opening of streets, thoroughfares, plazas, or squares.*—Under sections 2245 and 2246 of the Administrative Code of 1917, a municipal council may exercise the right of eminent domain and close any municipal road, street, alley, park, or square, subject to the approval of the department head. During the year 1918, 60 requests have been acted upon by this office.

G. LAW AND ORDER.

Five years ago the United States inaugurated a new policy in the administration of the affairs of the Philippine Islands. Radically differing from the one theretofore pursued in that it practically placed in the hands of Filipinos the rein of interior government in the islands, the new policy was augured by a prejudiced and misinformed few as the dramatic beginning of internecine troubles. The history of the last five years answers the prediction with scorn. During that period a state of peace has existed throughout the islands, and now it may be said without fear of contradiction that the disastrous results predicted by some are things of the past.

Hardly nine months had elapsed since the announcement of the new policy was made, when the world was shocked by the news of war. The mighty forces of autocratic Germany defied all laws of righteousness and humanity and one after another the nations of the world were drawn into the struggle. The severe pinch of war began to be felt throughout the Philippines. The prices of articles of prime necessity began to soar so high that last year they were almost beyond the reach of our common people. But, true to their traditional peacefulness, they have borne the abnormal conditions with patience and resignation, merely petitioning the Government to intervene in the regulation of prices in order to protect the masses from starvation. Typical of the peacefulness of our people is the public manifestation made by more than 20,000 laborers, men, women, and children, who in the month of August last paraded through the streets of Manila and then gathered before the Ayunta-

miento to hand a petition to the government asking that necessary action be taken with a view to reducing the prices of foodstuffs and other necessities of life. Such a manifestation carried on in the most peaceful and orderly manner had no parallel in any other war-afflicted country.

Owing to economic difficulties consequent upon the World War, some one would naturally suppose that lawlessness and criminality would be a common occurrence. But, no. Our peaceful and law-abiding inhabitants have behaved in the most exemplary manner. They have given no concern or embarrassment to the government even in those moments of extreme national crisis. Undoubtedly this is due in the main to the change in policy which resulted in the intelligent understanding between the people and the government. Of course occasional and insignificant breaches of the peace have happened. The Negrito unrest in the Province of Zambales may be cited as an instance. But such incidents are merely of local significance and the agencies of the Government have always been prompt and successful in apprehending the criminals and delivering them before the bar of justice.

The foregoing is a frank statement of general peace and public order conditions throughout the archipelago. It is an evidence, final and conclusive, of the existence of a stable government in the islands, a stability tested not only by the extension of government influence and control to the remotest districts inhabited by non-Christian Filipinos, where perfect order now reigns, but also by the uninterrupted maintenance of law and order during the World War.

H. OUR ORGANIZED PROVINCES AND MUNICIPALITIES.

Formerly organized Provinces and municipalities were governed by Acts Nos. 82 and 83 of the Philippine Commission, and numerous other acts amendatory thereof. All these acts were harmonized, consolidated, and embodied in an administrative code, which, as recently revised, is known as the Administrative Code of 1917. Another step to make provincial and municipal legislation more systematic and uniform has recently been taken. Formerly, in addition to the provincial and municipal laws applicable to the regular Provinces and municipalities, there were provincial and municipal laws applicable to the Provinces and minor political subdivisions in the Department of Mindanao and Sulu and laws applicable to the other special Provinces and political subdivisions therein. These latter laws are obsolete and no longer warranted by the progress made in those special Provinces since their enactment. For this reason, and for the sake of uniformity as above stated, these laws have been repealed recently and substituted, with slight modification, by those in force in the Department of Mindanao and Sulu which have proved to be highly progressive, and have contributed largely to the rapid political, social, and economic advancement in that region.

A survey of the laws affecting Provinces and municipalities will reveal the significant fact that the trend of legislation is toward uniformity and toward the extension of popular control over local governments, the gradual and steady assumption by the Filipinos of the entire provincial and municipal administration.

The supervision and control over organized Provinces and municipalities were formerly exercised by the Governor General through the executive secretary. Now, this power is intrusted to the secretary of the interior, through the chief of the executive bureau, both of whom are Filipinos. It is therefore deemed proper to describe even briefly the conditions of our Provinces and municipalities, especially during the period covered by this report, in order to show the great advances made by them under the administration of Filipino officials.

It should be stated at the outset that the provincial and municipal governments, to an increasing degree, are being encouraged to a more ample exercise of self-government and accustomed to less active supervision by the Central Government, the latter intervening only when the law so requires, or whenever the officials abuse their powers or grossly neglect their duties to the detriment of the public interests. Unnecessary intervention in provincial and municipal affairs has been discontinued and the autonomy of the Provinces and municipalities respected in so far as consistent with the safety of the Government and the general welfare. As a consequence, provincial and municipal officials now, more than ever before, appear to understand the responsibilities they have assumed. Whereas, before they had to be guided in every turn or step, now their administration is characterized by initiative and efficient action.

So, the greater autonomy granted has greatly reduced the number of offending officials. This shows a constant improvement in our provincial and municipal administration, a better realization on the part of our municipal officials of the responsibilities contracted by them with their constituents—the people whose sovereign will has exalted them to position and power.

Nor has progress been along political lines alone. Our Provinces and municipalities have also improved socially and economically. The year 1918 has seen a good increase in the number of our Provinces and municipalities. Although, as a general rule, the organization of new Provinces and municipalities is favored, yet it has been the constant policy not to recommend such organization unless the social and economic conditions of the places concerned fully warrant such action. The creation of so many Provinces and municipalities, therefore, is indicative of the progress being made along social and economic lines in our Provinces and municipalities.

The chief sources of revenue of the Provinces are the cedula tax, the percentage of internal-revenue taxes accruing to them, and the real-property tax; of the municipalities the cedula tax, internal-revenue licenses and percentage, real-property tax, municipal licenses, fisheries, cattle registration, and rents, profits, and privileges.

Their financial resources have, as a rule, permitted them to undertake necessary public works, such as the construction and repair of schoolhouses, municipal government buildings, roads, bridges, etc. They have encouraged and contributed to the establishment of public schools, the organization of a system of sanitation and the execution of public works, such as roads, bridges, provincial and municipal buildings, markets, and slaughterhouses, artesian wells, wharves, docks and piers, parks, and monuments. And in cases where their financial resources have not been sufficient to permit them to carry out public improvements the Provinces and municipalities readily contract loans, which they always endeavor to pay at the earliest possible date. In countless instances the people have shown commendable spirit by voluntarily contributing money, material, and labor for public purposes.

The foregoing brief statements show what progress has been made by our Provinces and municipalities under the administration of Filipino officials. They have accomplished wonders which any nation can be proud of. The inhabitants have seen schools multiply in remote barrios, and knowledge of hygiene and sanitation penetrate into the remotest communities. They have seen fine roads thread their way through every Province, transforming poverty-stricken regions into rich and flourishing communities. All these have brought to the Filipino people a sense of unity and have turned out a well-educated citizenry worthy of their race. The Filipino people have witnessed the transfer of government into their hands and have handled it in a manner creditable to themselves and their country.

I. OUR NON-CHRISTIAN TERRITORY AND INHABITANTS.

Our non-Christian territory is organized in the nine Provinces of Agusan, Bukidnon, Cotabato, Davao, Lanao, Sulu, and Zamboanga in the Department of Mindanao and Sulu, and the Mountain Province and Nueva Vizcaya on the island of Luzon. The inhabitants of this territory are not, however, wholly non-Christian, for a great portion of them is composed of civilized Christian elements. In Nueva Vizcaya, for instance, the civilized Christian inhabitants predominate. Our non-Christian territory is under the jurisdiction of the bureau of non-Christian tribes.

Our non-Christian inhabitants are not, however, confined to the territory above mentioned. Our special Provinces and several of the regularly organized ones also contain non-Christian elements, although limited in number.

The policy of the Government toward the non-Christian people has always been "to establish and promote friendly relations with the non-Christian people of the Philippine Islands and to promote their agricultural, industrial, and economic development and their advancement in civilization." Or, as clearly and unequivocally expressed by the Philippine Legislature in Act No. 2674, "to foster by all adequate means and in a systematic, rapid, and complete manner the moral, material, economic, social, and political development of the regions inhabited by non-Christian Filipinos, always having in view the action of rendering permanent the mutual intelligence between and complete fusion of all the Christian and non-Christian elements populating the Provinces of the archipelago."

The purpose of the organization of the bureau of non-Christian tribes is evidently to promote the rapid advance of non-Christian territory that the same may be organized as regular or special Provinces under the jurisdiction of the executive bureau. Accordingly laws have been enacted providing for the promotion of friendly relations and union between the Christian and non-Christian inhabitants of the Philippine Islands and the extension to the Department of Mindanao and Sulu and other special Provinces of laws of general application in the regularly organized Provinces.

The secretary of the interior, who is the official charged with the supervision over all the non-Christian people, has always followed the policy outlined above. His program of administration with regard to the non-Christian people has always in view the advancement of the non-Christian elements of our population to equality and unification with the highly civilized Christian inhabitants.

For the regular Provinces under the executive bureau, where non-Christians constitute a distinct element from the rest of the inhabitants, the secretary of the interior has appointed special agents to take charge of the work among those people. Uniform instructions have been issued to those agents to guide them in their work. Such instructions read as follows:

"Pursuant to the provisions of law, you are hereby appointed superintendent ——— under the department of the interior with compensation at the rate of ——— per annum, the appointment to take effect ———.

"In this connection, attention is invited to the provisions of section 279-b of the Administrative Code which provide that temporary and emergency employees are not entitled to leave of absence.

"By virtue hereof, you are hereby vested with the powers and duties of an agent of the secretary of the interior in the exercise of the authority conferred upon him by law over the ——— in question. It will be primarily your duty to dedicate all your time to the work of leading this people to economic, social, and political development. You should adopt means whereby those of them who are still given to nomadic life may be persuaded to abandon their wild habitat and settle in organized settlement. You should make them understand that it is the purpose of the Government to organize them politically into fixed and permanent communities, thus bringing them under the control of the Government; to aid them to live and work, protect them from involuntary servitude and abuse, educate their children, and show them the advantages of leading a civilized life in par with their civilized brothers. You should select suitable places where the several families may be gathered and concentrated with a view to organizing them politically. The organization to be established among them must be of the simplest and in keeping with their means, customs, and prejudices. You should promulgate such rules of government as may be considered adaptable to their ideas, customs, and needs.

"The organization of this people should be aimed at and accomplished, taking into consideration the likings and inclination of the people to be organized. They may prefer to continue their ways and mode of living by families scattered in the several places, instead of grouping together in a fixed and permanent settlement, in which case they should not be disturbed, but your attention should be concentrated to improving their living conditions in order that they may better appreciate the benefits and advantages of civilization. While allowing them, however, to settle by families they should be subjected to an efficient and united direction which will impress upon them the existence of ties superior to those of the family community in which they are living, and which will make them respect the authorities that may be constituted among them.

"Moreover, you should see that they are properly engaged in legitimate pursuits of some business or undertaking, especially in agriculture and farming. You should advise them that an exchange will be established among them, which will purchase from them whatever products they may offer for sale at reasonable prices, and will furnish them with such articles as they may require for their needs.

"Finally, you should cooperate with the school-teachers assigned to this people in the work of urging the children of school age to enroll in the schools, the education of those children being considered as the best medium by which this people can be brought to equality and unification with their more advanced neighbors.

"In the exercise of the foregoing powers, you should take into account the necessity of securing the decided and efficacious cooperation of the provincial authorities and peace officers of the Province. The tact, patience, discretion,

and skill required in the performance of your duties are such that they can only be satisfactorily discharged if you fully realize the importance of your mission and the service you are to render to your country. I hope you will enter with your whole heart and soul upon this work which, if successful, will not only afford you great satisfaction, because of the service rendered to your backward countrymen, but also will entitle you to the esteem and applause of the Government and of your people."

The expenses for carrying on the work of those special agents are voted by the Philippine Legislature as "discretionary expenses of the secretary of the interior for such purposes as he may consider necessary for establishing and promoting friendly relations with the non-Christian inhabitants of the Philippine Islands and for furthering their agricultural, industrial, economic, and social development and their progress in civilization." Moreover, there are non-Christian funds "maintained in the provincial treasuries of such of the regularly organized Provinces as contained non-Christian inhabitants which shall be available exclusively for expenditures for the benefit of the non-Christian inhabitants of the Province upon approval of the secretary of the interior." (See sec. 2114, Administrative Code.)

In the special Provinces the same course of action as regards the appointment of special agents is deemed advisable, although during the year 1918 no such agent has ever been appointed. This does not mean, however, that no action looking to the advancement of the non-Christian inhabitants in those Provinces has ever been taken. In fact, in the Province of Palawan the Lieutenant Governor has always been engaged in the work among the non-Christian people, while in the Province of Mindoro the Mangyan agent has been engaged in the work for the advancement of the Mangyan people.

Moreover, the special Provinces have been included in the non-Christian Provinces in the matter of special scholarships.

Then there are special provisions in the Administrative Code of 1917 which are intended to aid the non-Christian people in those special Provinces to acquire the knowledge and experience for successful local popular government and to maintain law and order and individual freedom among them. Said provisions read as follows:

"SEC. 2145. ESTABLISHMENT OF NON-CHRISTIANS UPON SITES SELECTED BY PROVINCIAL GOVERNOR.—With the prior approval of the department head, the provincial governor of any Province in which non-Christian inhabitants are found is authorized, when such a course is deemed necessary in the interest of law and order, to direct such inhabitants to take up their habitation on sites on unoccupied public lands to be selected by him and approved by the provincial board."

"SEC. 2739. REFUSAL OF A NON-CHRISTIAN TO TAKE UP APPOINTED HABITATION.—Any non-Christian who shall refuse to comply with the direction lawfully given by a provincial governor, pursuant to section 2145 of this code, to take up habitation upon a site designated by said governor, shall upon conviction be imprisoned for a period not exceeding sixty days."

The above-quoted provisions of law have been in existence in our statute book for a long time, but it was only in 1918 when their validity was first challenged. Thereunder the provincial governor of Mindoro and the provincial board thereof directed the Mangyans to take up their habitation in Tigbao, a site on the shore of Lake Naujan selected by the provincial governor and approved by the provincial board. An application for habeas corpus in their favor was presented before the supreme court, and this high tribunal denied the application.

So much for the non-Christian elements in our regular and special Provinces. We now come to those in the non-Christian territory proper where the program of administration and its specific ends may be summarized as the extension and maintenance of Government control and public services to assure public order and as rapid economic development as possible for the adult inhabitants, and the compulsory attendance at public schools of all children of school age wherever public-school facilities have been provided.

There are thus undertaken to be established on a firm basis (1) acceptance of and obedience to constituted government by all elements of population even in the most remote regions, (2) the material improvement of the economic condition of the people through the extension to them of all the various branches of public service beginning with police protection to assure security of life and property and including even the facilities of the provincial trading stations where, with the certainty of fair dealing, the people may find

good markets for their products and available stocks of the staple articles of merchandise which they require but do not or can not produce, and (3) sufficient progress in the understanding and practice of citizenship and economic efficiency through training of children and youth to assure future stability of government upon the younger generation coming into control of local affairs.

The policy and definite program of government as to political development include the present adult as well as the younger generation. This program not only undertakes to assure to Mohammedans and pagans representation in the provincial governments but also practical training in local government through the appointment of the best available representative men as presidents, vice presidents, and councillors in the municipal district organizations which are embryo municipalities. Special importance has been given, as matter of policy to the placing of local government to the maximum practicable degree in the hands of popular local leaders. To this must be attributed in great part the generally favorable response of Mohammedans and pagans to the requirement of submission to constituted government and the undoubted considerable inclination of popular opinion favorable to political and social unification with the Christian population.

Moreover, selected individuals from those regions and also from the special Provinces under the executive bureau, whose professional training or inclination or whose influence over his or her people, may be of great value in rendering permanent the complete fusion of the Christian and non-Christian elements, have been appointed to special scholarships. Such selected individuals, upon completing the course which they are required to pursue will be sent back to their people to preach the gospel of harmony and union. During the year 1918, 10 such special scholars have been appointed.

The efficiency and success of the work among the non-Christian people is well shown by the fact that they are now living in peace and contentment, and are engaged in agriculture and industry. They are sending their children to school and are beginning to appreciate the advantages of leading a civilized life. Verily, civilization and progress have dawned on these people in a permanent and lasting form as evidenced by the great strides with which they are adapting themselves to the onward march of times and their tendency toward self-betterment. There is therefore no cause for worry or despair. The progress of those people is most encouraging and the signs of the time point to a day not far distant when they will become as useful citizens as their brothers, the Christian Filipinos.

J. EXECUTIVE BUREAU.

The activities of the executive bureau have always been confined within the policy or program of administration announced by the department head of extending to Provinces and municipalities as much autonomy as the law permits, intervening only whenever the law requires or whenever the officials abuse their powers or neglect their duties to the serious detriment of the public interest and welfare. Among the works performed by the executive bureau during the year covered by this report may be mentioned the following:

(a) *Real-property assessments.*—The revision of real-property assessments in the Provinces of Batangas, Pampanga, and Tarlac was completed during the year 1918, and there are now 21 Provinces whose revision under the assessment law has been completed.

The revision work in 664 municipalities and 3 townships has been finished—75 municipalities and 1 township in 1918 and 589 municipalities and 2 townships in previous years.

Before the general revision of assessments provided by Act No. 2238 was undertaken the number of taxable parcels was 1,947,486, assessed at ₱298,905,970. At the end of 1918 the number of taxable parcels and their assessed valuation were 3,245,276 and ₱6,110,778,230, respectively, thus showing an increase of 1,282,024 parcels and ₱308,836,680 in assessed valuation. The percentage of increase in valuation is 113. The three Provinces ranking high in the increase of percentages of parcels and of assessed valuation are Bohol, Surigao, and Leyte.

(b) *Provincial budgets and plantillas of personnel.*—Provincial budgets and plantillas of personnel for all the Provinces of the islands, except those of the Department of Mindanao and Sulu, are acted upon by the executive bureau.

All plantillas for the year 1918, were approved by this bureau with the necessary amendments. (Sec. 2081 of the Administrative Code.)

(c) *Voluntary contributions.*—The executive bureau originally acts on requests for authority to collect and receive voluntary contributions. One hundred and fifty-six of such requests were received and recommended to the Governor General and finally granted by him.

(d) *Inspection by provincial agents.*—During the year, 21 Provinces have been visited by provincial agents.

Conditions in these Provinces as found by provincial agents were, in general, satisfactory. Some deficiencies like the laxity on the part of a few provincial and municipal officials in the performance of their duties, insanitary conditions of some public markets, inadequate provisions for municipal police force and municipal prisons, and improper operation of one provincial steamer have been noted. These deficiencies have been, or otherwise are now being, remedied.

(e) *Payment of bonuses to provincial and municipal officials and employees.*—Following the plan of granting bonuses to insular officials and employees in view of the existing abnormal conditions, the bonus system was extended to Provinces, thereby according to provincial and municipal officials and employees the same consideration given insular officials and employees in this regard.

It was not possible to authorize the payment of bonuses to provincial and municipal officials whose salaries are fixed by law during the year 1918, as there was no law which would make this action legal. To this effect recommendation was duly made to the department of the interior for special legislation, and Act No. 2785 (appropriation for 1919) now authorizes said payment, effective January 1, 1919. Provinces were advised accordingly.

(f) *Organization of new municipalities.*—The executive bureau primarily acts on matters relating to the organization or creation of new municipalities. The finances or resources, the location, and other matters relative to the ability or advisability of a given political division or divisions being organized as an independent municipality are investigated by the executive bureau. Upon the recommendation of this bureau, 18 new municipalities were organized during the year by executive orders of the Governor General, effective January 1, 1919.

The organization of 19 barrios or settlements and the transfer of the seats of government of 3 townships were recommended to the Governor General during the year covered by this report and finally approved by him.

(g) *Administrative investigation.*—During the year 1918 there were received in the executive bureau 67 cases against municipal officials, of whom 48 were found guilty and 18 found not guilty. Only 1 case was pending final action at the end of the year. Of those found guilty, 12 were removed from office and 36 were suspended, reinstated with reprimand or warning, or otherwise disciplined. Of the officials disciplined, the municipal presidents numbered 17; vice presidents, 4; councilors, 26; and secretary, 1. Of the officials exonerated, 6 were municipal presidents, 2 vice presidents, while 10 were councilors. The only case pending final action at the end of the year was against the municipal president of Dumaguete, Oriental Negros.

(h) *Appeals by municipal council.*—Under the provisions of section 2235 of the Administrative Code of 1917, a municipal council, in case of disapproval of their ordinances or resolutions, appeal by a two-thirds vote to the chief of the executive bureau. Twenty-two such appeals by municipal councils were received and disposed of by this office in 1918; 15 dismissed and 7 sustained.

(i) *Appointment of officials of new municipalities.*—Recommendations for appointment of officials of new municipalities are also made by the executive bureau and forwarded to the secretary of the interior. During the year the officials for the new municipalities were appointed by His Excellency the Governor General, upon the recommendation of this office and the secretary of the interior.

(j) *Circulars.*—For the purpose of more effective supervision which this office exercises over Provinces and municipalities, the executive bureau has issued circulars during the year, 6 numbered circulars and 20 unnumbered ones.

(k) *Cooperation with other government bureaus or offices.*—The executive bureau has continued to cooperate with the other bureaus and offices in the effective performance of the functions assigned to them by law. Thus this bureau continues to cooperate with the bureau of agriculture in the campaign for the eradication of locusts and rinderpest by urging provincial and municipal officials to exert their utmost effort to eradicate the pests and reprimanding them when found negligent or lax in the performance of their duties; with the

bureau of health in the prevention or eradication of epidemic diseases, such as cholera and smallpox, as evidenced by the various circulars already issued by this office; with the bureau of coast and geodetic survey in securing for the local authorities geographical data; and with the bureau of non-Christian tribes in carrying out the policy of the Government to bring the territory under that bureau under the same form of government as that existing in the other parts of the islands. In general, cooperation has been lent to all other bureaus and offices in movements beneficial to Provinces and municipalities.

(1) *Other provincial matters.*—The following matters have also received the attention of this bureau: 1,350 provincial and municipal requisitions for printing during the year 1918; 13 resolutions adopted by provincial boards under section 2096 of the Administrative Code of 1917 requiring either elective members of the provincial board to perform the duties of any other provincial officer or to perform any ministerial duty required by the board, of which number 6 were disapproved and 7 were approved; 7,474 requisitions for supplies on the bureau of supply by the provincial and municipal governments, all of which were received and approved by this bureau.

Numerous requests were made by provincial officials for permission to leave the Provinces on official business and to visit Manila to take up official matters with the Central Government. Requests were made for increases in salaries of municipal officials in excess of those authorized by section 2184 of the Administrative Code of 1917, of which requests 14 were granted and 22 denied. Bills introduced in both houses of the Philippine Legislature affecting Provinces and municipalities are oftentimes referred to the executive bureau for comment and recommendation.

Petitions from provincial and municipal officials to engage in private business were made.

K. BUREAU OF NON-CHRISTIAN TRIBES.

The year covered by this report has been one of highly satisfactory progress generally throughout the territorial jurisdiction of this bureau not only in the extension and strengthening of Government control, but also in all activities of public service. This has been due not only to the increasing experience and consequent greater efficiency of administrative personnel, but also and especially to the better understanding and acceptance of constituted Government control and its acceptance by the people is found in the general increase in the number of taxpayers both as to the capitation (*cedula*) and the real-property taxes.

Conditions as to public order have been encouraging in the highest degree throughout the year due to the excellence of the constabulary work and the close cooperation by the personnel of all branches of Government operating within these Provinces. There is no organized band of outlaws nor in any district is there defiance or refusal to submit to Government. Security of individual life and property is greater than at any previous time in the history of these Provinces.

Compulsory school attendance, even in Mohammedan regions and affecting girls as well as boys, has been put into effect with remarkable success wherever the Government was prepared to provide the necessary teachers, buildings, etc.

Economic progress during the year has continued as to agriculture, commerce, and industries, with some depression during the latter part of the year because of disturbed conditions of the hemp market and the consequent reduction in the output of the plantations. The food situation has presented no serious problem.

In every respect conditions generally throughout the jurisdiction of this bureau during and at the close of the year have confirmed the policy of Government in these specially organized provinces.

L. BUREAU OF CONSTABULARY.

Administratively, the year 1918 has been a year of many perplexing problems. With war prices soaring high and officers going out by the score, the conditions in the bureau have been that of constant watching and supervision. The appropriation for supplies and equipment was not based on war prices. However, these had to be met. The subsistence of 21 cents per day for enlisted men was found entirely inadequate, and it taxed our officers to their utmost to make both ends meet.

Law and order throughout the islands are most satisfactory and no ladrone bands exist. The relations between Christians and non-Christians in northern Luzon continue most harmonious and trading between the mountain and lowland people has increased accordingly. No fear is entertained by either to enter the other's territory. No feuds of any importance exist between the different settlements of non-Christians, and it is noteworthy that no headtaking has been recorded during the year. With the surrender of the Negrito leader, Domingo Angcot, on February 27, 1918, the unrest among the people in the mountains of Zambales has ceased and they are living in peace and tranquillity.

On the whole, excellent progress has been made in the extension of Government influence throughout the non-Christian territory. In the Province of Lanao the collection of cedula tax shows a 25 per cent increase over that of 1917. In the Province of Bukidnon 12 families from Batanes Islands have settled at Mallag and engaged in agricultural pursuits, while the southeastern part of Cotabato Province has been the scene of a larger influx of Ilocanos, who have settled there and are peacefully cultivating their farms, living in perfect peace and harmony with their neighbors, the Tirurays. Schools have been established wherever the number of children have warranted them, and considerable increase in the attendance has been noted.

The political situation throughout the archipelago has undergone a complete change, and all parties are harmoniously working toward a common end—the political and economic advancement of the country.

The world conflict has advanced the process of foodstuffs enormously, but at the same time the country has never been as prosperous as during the past year.

On December 31 there were in all 6,325 municipal police, armed with 4,618 swords, 2,656 revolvers, and 605 other firearms. The efficiency of the police is as good as to be expected, considering the salaries paid.

M. PHILIPPINE GENERAL HOSPITAL.

The facilities of the Philippine General Hospital until about the middle of the year were available for about 420 beds, of which 95 were for pay patients and the rest were for the use of charity patients. Due to the increasing demand for hospital accommodation, especially during the influenza epidemic, the capacity of the hospital has been increased to 460 beds.

Although the privilege of Government employees and their families to free medical assistance at the hospital was abolished, the pay sections are always crowded. This proves that the Government employees still continue to come and that the well-to-do class of the population now realizes the benefits which can be derived from a modern hospital treatment.

The private pay patients have been given more privileges than before, among which is the privilege to be accompanied during the night, whether they are very sick or not, by a member of their families or by a friend who is of the same sex as the patient, and when they are seriously ill, to be accompanied by a person of whatever sex, provided a permission to this effect has been previously obtained from the director.

The Philippine National Guard has claimed the services of some of the hospital employees, especially the resident doctors. In some departments the work of the hospital was greatly affected by this shortage of residents and it was necessary to appoint new graduates and to qualify the senior medical students to take their places. The free out-patient maternity service of the department of obstetrics, which has been doing good work for the poor of the city, had to be discontinued on October 27 owing to the shortage of doctors.

The graduating class in the school of nursing consists of 122 senior nurses and 10 midwives. Upon their graduation they would leave a large number of vacant places which will have to be filled by new applicants, if the efficiency of the service has to be maintained. As one of the requirements for admission to the school of nursing in 1919 is that the applicant must have completed the second year of high-school course, in order to be able to admit as many applicants as are necessary to fill all the places to be left vacant, the school of nursing has requested the board of regents of the University of the Philippines to suspend the enforcement of the above requirement temporarily and to authorize the Philippine General Hospital to receive not only those applicants who have completed the second year high school but also those who have finished the first year.

The work in some of the departments has also been hindered to a certain extent by the increase in the cost of materials and supplies. However, the hospital work has been, on the whole, performed very satisfactorily.

The hospital is in need of a library. The nurses' library and the so-called staff library of the hospital do not meet the requirements of a real hospital library, as the former consists of a few bound volumes, some nonmedical magazines and journals, and Manila daily newspapers.

The hospital is spending about ₱42,000 for laundry annually. There is no doubt that, if the hospital laundry were handled by the hospital itself and not by a private concern, as it is at present, a large amount of money would be economized and that the use and handling of linen would be taken care of in a more satisfactory and economical manner.

Several repairs and alterations of the buildings and grounds of the hospital have been made, but there are still others to be accomplished. The present buildings have been constructed in many respects on a temporary basis, and many things in connection with their construction and the arrangement of the grounds, which can not be put on a permanent basis until the hospital, as it was originally planned, is completed, have to be adjusted continuously to the demands of a developing institution.

The Southern Islands Hospital was transferred to and became a branch of the Philippine General Hospital on January 1, 1918, by virtue of Act No. 2725 of the Philippine Legislature. The same act also provided for the establishment of a school of nursing of the hospital, which was inaugurated on April 15 with an enrollment of 25 pupil nurses. A house near the hospital was rented to be used as the pupil nurses' dormitory. The assistant chief nurse of the School of Nursing of the Philippine General Hospital was appointed chief nurse and principal of the Southern Islands Hospital School of Nursing, and she, together with some members of the nursing staff of the hospital and some private doctors in Cebu, constitute the faculty of the school.

The Southern Islands Hospital can accommodate at present 60 patients. The number of patients admitted during the year shows an increase of 231 over 1917.

N. GOVERNMENT ORPHANAGE.

The general care given to the children starts from the time of the admission, when a medical (physical) examination is made. As a general rule, children admitted to the orphanage come from the very poor classes of people, and their health, clothing, and general appearance speak of their past.

After a child is admitted, those above 5 years of age are supplied with clothing for their daily use as well as those to be used for holidays and other equipments, like towels, toothbrushes, mat and pillows, and a wooden box or trunk in which to keep his or her new belongings. After a while he or she would receive assignment of work in connection with the general plan or rotation system carried on by the institution to furnish the service desired to be accomplished. At the school he or she was placed in the grade where he or she belonged.

In the dormitories the children are taught and required to take their daily bath, clean their teeth, keep their clothes in order and change them accordingly, and see that they have a good sleep.

Children are weighed monthly to find out whether they receive sufficient nourishment. Height is taken and recorded quarterly.

A visiting dentist has been engaged by the institution in order to come at regular intervals, in order to inspect, make extraction and other treatment to the children's teeth.

Common illness in childhood, and the treatment of the same is done at the orphanage, which has a physician and a nurse among the employees, and where a small medicine room is kept well supplied with medicine and drugs needed and where emergency and other minor operations are performed. There is also, in addition, a laboratory where the examination of blood, urine, and feces is made. Sick children requiring hospital attention are sent to the Philippine General Hospital. There is an isolation room in a separate building where children with measles, mumps, pink eye, and other mild infectious diseases are taken care of and isolated, although whenever advisable children with infectious diseases are sent to San Lazaro Hospital.

Preventive work is employed and, thanks to the efforts made and to the systematic vaccination, the smallpox epidemic did not invade the institution.

The Spanish influenza epidemic, which appeared all over the world (pandemic) in 1918, had caused the confinement in bed, due to the infection of the disease, of

78 inmates of the orphanage, and while all the hospitals in Manila were filled and unable to receive cases of this disease, the situation was confronted successfully at the orphanage, where only one death from complication occurred, which had taken place at the Philippine General Hospital. Complications appeared in 22 cases among those taken care of in the orphanage, but none died.

A special class has been opened during the year (1918) to give an opportunity to the big boys and girls to make up the grade that their ability and age would permit.

The children are also taught industrial and trade work.

O. BOARD OF PHARMACEUTICAL EXAMINERS AND INSPECTORS.

Upon the organization of the board, steps have been taken to draft the rules on examinations for candidates to pharmaceutical profession and by-laws of the board as board of examiners and inspectors.

On July, 1918, the board held its first examination. The number of candidates was 52, 24 of whom have been approved, 8 conditioned, and 20 failed.

This board has collected the sum of ₱2,120 for examination fees and for apprentice certificates.

P. BOARD OF MEDICAL EXAMINERS.

The members of the board in the year 1918 were Dr. Isidoro de Santos, chairman; Dr. Fortunato Pineda, secretary-treasurer; and Dr. Idefonso Villa-Real, member.

The board held its regular quarterly written examination, resulting in the registration of 73 physicians and 34 midwives.

The amount of money collected by the board as fees was ₱4,656, while the expenses amounted to only ₱1,958.54.

Q. BOARD OF DENTAL EXAMINERS.

During the year 1918 the membership of the board consisted of Dr. A. P. Preston, chairman; Dr. Miguel de la Concepción, secretary-treasurer; and Dr. G. R. Mateo, member.

The board held its regular examination in June and December, resulting in the registration of 16 doctors of dental surgery.

The amount of money collected by the board in 1918 was ₱1,802, while the expenses amount to only ₱441.74.

R. BOARD OF OPTICAL EXAMINERS.

At the end of the year 1918 the board of optical examiners consisted of Dr. G. T. Herrmann, chairman; Dr. Cipriano Lara, secretary-treasurer; and Dr. Ramon J. Ongsiaco, member.

The board held three examinations during the year, resulting in the registration of 28 optometrists.

The amount of money collected by the board as fees was ₱1,830, while the expenses amount to only ₱886.49.

S. PUBLIC WELFARE BOARD.

There were seven private organizations benefited by the Government fund during the year. These organizations are the following:

1. Philippine Islands Antituberculosis Society.
2. Gota de Leche.
3. Philippine National League for the Protection of Early Infancy.
4. Woman's Club of Manila (day nurseries).
5. Asociación de Damas Filipinas.
6. Philippine Orphanage Association.
7. Lucena Hospital.

Each of these private organizations has made efforts to obtain funds of its own by membership, benefit performances, soliciting donations, etc., and one of them has depended entirely upon the Government contribution.

T. CITY OF MANILA.

The policy of the present administration in Filipinizing the Government service has been followed in the city government, whenever competent Filipinos are found qualified to hold important positions in the city.

City officers and employees, including the temporary teachers, were granted a bonus at the rate of 25 per cent for those whose annual compensation is less than ₱2,400; 15 per cent for those whose annual compensation is ₱2,400 but less than ₱4,000, and 10 per cent for those whose annual compensation is ₱4,000 or more.

In the matter of carrying out public works improvements it has been, and it is still, the policy of the undersigned to have all the work done by administration whenever feasible. This procedure has been followed with a view to giving the engineers of the city ample practice in their vocations, aside from the fact that such procedure is more economical.

A careful perusal of the activities of the different branches of the city government made during the year would convince anyone that the city of Manila has accomplished the ends entrusted to it by the Philippine Legislature. Measures for the sanitation and safety, the furtherance of prosperity, and the promotion of morality, peace, good order, comfort, convenience, and general welfare of the city and its inhabitants have been taken. More new streets have been opened to traffic, connecting the various sections of the city with the commercial and industrial centers, while those existing have been maintained in good condition. More new schools have been opened during the year, the enrollment having increased from 27,626 in 1917 to 30,746 in 1918.

The general condition of state affairs at the end of the year is highly satisfactory.

U. CITY OF BAGUIO.

The cost of living in Baguio was rather high last year compared with previous years. The prices of all foodstuffs were raised, and had not the city intervened in the selling of meat and rice at the market many people, especially the poor and labor class, would have suffered. Through competition the city was able to keep the price of meat and rice in Baguio at a moderate rate.

In view of the rising of the cost of living in Baguio the city council adopted its Resolution No. 91, series 1918, granting bonuses to all city employees, at the rate of 15 per cent of the salary of those receiving ₱2,400 or more per annum; and at the rate of 25 per cent of the salary of those receiving less than ₱2,400 per annum.

Peace and order have been maintained during the year, and no public disorder or calamity of any kind took place in the city during the year.

The construction of a concrete water tank for the Baguio waterworks has been completed during the year, the city having spent the amount of ₱21,601.68 on this work.

The construction of the concrete market building to be used for selling meat, fish, and vegetables was continued during the year, the city having spent the amount of ₱25,004.19 on this work.

The construction of a concrete animal shed near the city market was also continued during the year and is now near completion, the city having spent the amount of ₱12,346.15 on this work.

The road system of Baguio was extended by the construction of 3 kilometers of first-class roads; 33 kilometers of first-class roads were maintained at a cost of ₱44,538.19; and the amount of ₱4,807.74 was expended by the city for the maintenance of third-class roads and trails.

Very respectfully,

RAFAEL PALMA,
Secretary of the Interior.

The GOVERNOR GENERAL, *Manila.*

REPORT OF THE DEPARTMENT OF MINDANAO AND SULU.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS,
DEPARTMENT OF MINDANAO AND SULU,
OFFICE OF THE GOVERNOR,
Zamboanga, P. I., March 15, 1919.

SIR: Owing to the lack of data, which have only been received during the last days of February, and to my absence from Zamboanga on inspection trips during the month of March, the preparation of this report has been delayed.

On December 16, 1918, I received from the director, bureau of non-Christian tribes, the following telegram:

"* * * You please prepare and sign Department governor's annual report to this office."

In compliance with the instructions contained in the above-quoted telegram and with the provisions of section 2585 (h) of the Administrative Code of 1917, I have the honor to submit this annual report on the affairs of the Department of Mindanao and Sulu for the year ending December 31, 1918. This is the fifth annual report submitted since the organization of the Department and the first which the undersigned submits in his capacity as acting Department governor. By reason of his manifold duties as director of the bureau of non-Christian tribes, Gov. Carpenter found himself under the necessity of spending the greater portion of his time in Manila and in inspection trips within his territorial jurisdiction, which comprises 40 per cent of the total territorial area of the Philippine Islands.

TERRITORIAL JURISDICTION.

With the exception of the Provinces of Misamis and Surigao, the Department of Mindanao and Sulu comprises the entire island of Mindanao and the Sulu Archipelago, including Cagayan de Sulu. To date there exists certain controversies between the Government of the Netherlands and the United States Government over the Palmas Island, located about 42 miles south of Mati. Davao, but it is believed that this island belongs to the Philippine Islands and within the territorial jurisdiction of Mindanao-Sulu. Arrangements are also being made whereby the islands comprising the Turtle Group, lying 18 miles from North Borneo, may come under the absolute control and administration of the provincial government of Sulu, Department of Mindanao and Sulu.

The following is the total estimated area of the seven Provinces comprising this Department:

	Square miles.
Agusan.....	4, 294
Bukidnon	3, 871
Cotabato	9, 620
Davao	7, 486
Lanao.....	2, 439
Sulu	1, 082
Zamboanga.....	6, 383

Mindanao-Sulu comprises approximately one-third of the total area of the Philippine Islands and "exceeds in area the States of Connecticut, Delaware, New Hampshire, Rhode Island, and Vermont combined; the Kingdoms of Denmark and Holland together; Portugal or Greece." (Report Department governor, 1914.) By comparison with other Philippine Provinces it will be seen that Agusan is greater in area than Zambales, Batangas, Tarlac, La Union, and Batanes combined; Bukidnon is as large in area as the Provinces of Misamis, Antique, Bulacan, and Pampanga combined; Cotabato is greater in area than the Provinces of Cebu, Ilocos Sur, Iloilo, Pangasinan, Pampanga, Bulacan, Cavite, Laguna, and Rizal combined; Davao is as large in area as the Provinces of Sorsogon, Iloilo, Negros Oriental, and Batangas combined; Lanao is greater in area than Bohol and Rizal Provinces combined; Sulu is as large in area as

the Provinces of La Laguna, La Union, and the city of Manila combined; and Zamboanga is as large in area as the Provinces of Pangasinan, Cebu, Albay, and Misamis combined.

Population.

Province.	Christian.	Moham- medan.	Pagan.	Total.
1. Agusan.....	30,000	.....	35,000	65,000
2. Bukidnon.....	21,500	3,000	41,800	66,300
3. Cotabato.....	6,337	107,205	35,402	149,444
4. Davao.....	33,124	7,803	61,803	102,800
5. Lanao.....	6,201	75,960	1,550	83,711
6. Sulu.....	2,750	120,000	.....	122,750
7. Zamboanga.....	58,650	45,000	30,000	133,650
Total.....	159,132	358,968	205,555	723,655

This population, which is made up of different tribes, consists of what are popularly known as: Manobos, Mamauas, and Mandayas in Agusan; Bukidnon, Manobos, and Moros in Bukidnon; Maranaos and Monteses in Lanao; Maguindanaos, Tirurays, Bilanes, Manobos, Tagabillis, Dulaganes, and Ilanons in Cotabato; Bagobos, Manobos, Mandayas, Moros, Mangulangans, Gulangas, Tagacaolos, Bilanes, Atas, Culamans, and Tigdapaya in Davao; Taw-sugs (Joloanos), Samales, and Bajaos in Sulu; Yakanes, Samal Laud, Samal-Palau, Samal Lutanga, Ylanons, Subanos, and Calibuganes in Zamboanga, making a total of 29 in all, besides the Christian population, which term applies to all other inhabitants who are neither Mohammedans nor pagans.

The increase in population during 1918 is comparatively less than that during 1917, it being estimated that only about 12,000 immigrants have settled into the various Provinces in Mindanao, especially Davao. Of these 12,000 8,771 are laborers and homeseekers, who have been shipped by the immigration office to Davao, Zamboanga, and other points in Mindanao.

LEGISLATION.

The Administrative Code of the Department of Mindanao and Sulu was published in February, 1918, which is a compilation of the laws, executive orders, and circulars in force in Mindanao-Sulu. The Philippine Legislature has an absolute legislative control over the Department of Mindanao and Sulu, and all laws which it enacts are applicable in the entire Department unless otherwise specifically provided. The following acts have immediate application thereto:

Act No. 2727, an act appropriating funds for the necessary expenses of the Government of the Philippine Islands during the fiscal year ending December thirty-first, nineteen hundred and eighteen, and for other purposes.

Act No. 2766, an act to amend Act Numbered Twenty-three hundred and fifty-two, entitled "The census act."

The following acts are also applicable or may be made applicable in the Department of Mindanao and Sulu:

Act No. 2728, an act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes.

Act No. 2733, an act to amend sections fourteen hundred and eighty-five, fourteen hundred and ninety-one, and fourteen hundred and ninety-two of the Administrative Code for the purpose of permitting the transfer of cigarettes under bond, and for other purposes.

Act No. 2743, an act to appropriate the sum of five thousand pesos for the free distribution of antityphoid vaccine among the duly qualified physicians of the Philippine Islands.

Act No. 2745, an act to amend Act Numbered Twenty-five hundred and ten, entitled "An act for the purpose of establishing a public welfare board for the Philippine Islands, and defining its powers, functions, and duties," and for other purposes.

Act No. 2747, an act to amend in certain particulars Act Numbered Twenty-six hundred and twelve, entitled "An act creating the Philippine National Bank."

Act No. 2751, an act to amend section twenty-six of Act Numbered Twenty-seven hundred and fifteen, entitled "An act to establish the Philippine Militia, provide for the enrollment of the unorganized militia, and the formation, organ-

ization, and government of the organized militia of the Philippine Islands, appropriating funds therefor, and for other purposes," reforming the personnel of the signal corps, creating a field signal battalion, increasing the aviation section, and creating positions of cadets for the aviation service, and for other purposes.

Act No. 2732, an act to amend section twenty-one of the Administrative Code, authorizing the presidents of townships to administer oaths.

Act No. 2735, an act to provide for the teaching of the Spanish language in the high schools of the government.

Act No. 2736, an act making appropriations for public works.

Act No. 2737, an act to amend section two of Act Numbered Twenty-six hundred and thirteen, as amended by section one of Act Numbered Twenty-seven hundred and thirteen, entitled "An act to amend section two of Act Numbered Twenty-six hundred and thirteen, entitled 'An act to improve the methods of production and the quality of tobacco in the Philippines and to develop the export trade therein.'"

Act No. 2738, an act establishing the mint of the Philippine Islands and appropriating funds for said purpose.

Act No. 2768, an act to amend section two hundred and six of the Administrative Code, authorizing the transfer of justices of the peace from one municipality to another.

Act No. 2772, an act authorizing the merger or consolidation of certain corporations, and for other purposes.

Act No. 2755, an act to authorize the establishment of municipal irrigation systems, and for other purposes.

Act No. 2756, an act to provide for the relief of the invalids of the Philippine revolutions or wars, appropriating funds for this purpose, and for other purpose.

Act No. 2758, an act providing for the establishment of stock herds and farms for the same, appropriates funds therefor, and for other purposes.

Act No. 2761, an act to amend sections eleven hundred and seventy-two, eleven hundred and seventy-six, and twelve hundred and two of the Administrative Code.

Act No. 2764, an act to amend Act Numbered Twenty-five hundred and seventy-three as amended by Act Numbered Twenty-six hundred and eighty-two.

Act No. 2775, an act to amend section fourteen hundred and ninety-three of the Administrative Code.

Act No. 2778, an act to amend the Philippine tariff law of nineteen hundred and nine, providing that products of the United States returning to the Philippine Islands from foreign ports shall be free of duty, under certain conditions.

Act No. 2779, an act to provide for the free entry in the Philippine Islands of the products of Guam.

Act No. 2780, an act to provide for the issue of bonds of the government of the Philippine Islands for the construction of a submarine and a destroyer.

Act No. 2781, an act amending first paragraph of section one thousand six hundred and sixty-one of the Administrative Code.

The following executive orders of the Governor General are applicable in the Department of Mindanao and Sulu:

Executive Order No. 10, an order reserving public land for school purposes, Malaybalay, Bukidon, Mindanao and Sulu.

Executive Order No. 13, an order reducing office hours of all Government bureaus and offices, etc., from April 1 to June 14, 1918.

Executive Order No. 15, an order regarding acceptance of Liberty loan bonds by Government officers, etc.

Executive Order No. 23, an order reserving public land for school purposes, municipal district of Silik, Cotabato, Mindanao Island.

Executive Order No. 27, an order reserving public land for provincial purposes, Cotabato, Province of Cotabato, Mindanao Island.

Executive Order No. 31, an order amending Executive Order No. 11, 1914.

Executive Order No. 32, an order reserving public land for road purposes, Zamboanga, Zamboanga Province, Mindanao and Sulu.

Executive Order No. 34, an order reserving public land for road purposes, Zamboanga, Zamboanga Province, Mindanao and Sulu.

Executive Order No. 48, an order reserving public land for constabulary purposes, municipal district of Glan, Cotabato, Mindanao Island.

Executive Order No. 53, an order reserving public land for school purposes, Cotabato Province, Mindanao Island.

Executive Order No. 59, an order reserving public land for agricultural school purposes, municipal district of Mallag, Bukidnon, Mindanao Island.

The following executive orders are also applicable or may be made applicable in the Department of Mindanao and Sulu:

Executive Order No. 7, an order amending civil service Rule XIII, prohibiting Government employees from purchase of property sold under order of courts.

Executive Order No. 17, an order regarding redemption of Spanish-Filipino and Mexican money.

Executive Order No. 18, an order regarding duties and powers of secretary of agriculture and natural resources, re food-production campaign.

Executive Order No. 24, an order re amendment of section 1, civil-service Rule XI.

Executive Order No. 25, an order constituting a council of defense for the Philippine Islands and designating the members thereof.

Executive Order No. 28, an order amending Executive Order No. 25, current series, re constitution of a council of defense for the Philippine Islands.

Executive Order No. 36, an order suspending all duties upon rice imported into the Philippine Islands until December 31, 1918.

Executive Order No. 37, an order regarding creation of a council of state.

Executive Order No. 41, an order publishing certain provisions of act of Congress of July 8, 1918, entitled "An act providing for the protection of the uniform of friendly nations, and for other purposes."

Executive Order No. 47, an order regarding appointment of members of council of state.

Executive Order No. 54, an order amending Executive Order No. 28, current series, re appointment of council of defense for Philippine Islands.

Executive Order No. 63, an order continuing in force until December 31, 1918, rates of duty on rice imported into the Philippine Islands.

POLICY OF GOVERNMENT.

There has been no change in the policy of the Department, with only the exception that during the year 1918 the transfer of the responsibility of the Department to the provincial governments has been made in a greater degree. The measure responds to the objective of placing said Provinces as rapidly as possible on an equal basis as the Provinces of the Visayas and Luzon. Filipinization has been continued in the changes of personnel, and the powers of local authorities have also been amplified by making them more responsible for the situation in their respective territorial jurisdictions. With respect to social activities the same policy of attraction has been followed, employing, however, wherever there be necessity therefor compulsory measures for the attendance in schools of Moro girls. The assimilation among the diverse tribes in Mindanao and Sulu in the first place, and with the inhabitants of other islands in the second place, has received preferential attention. The differences between one and the other are rapidly disappearing, and there has been noted daily greater community of sentiments, greater tolerance in their beliefs, and greater cordiality in their relations, under which they live, harmoniously carrying on a common work.

Taking last year's production as a basis, it has been observed that greater activity has been displayed in agriculture, the measures that have been adopted having resulted in the cultivation of greater areas of coconut grove and food products as well as the establishment and organization of provincial and private cattle ranches. Industry and commerce have also received adequate attention by the adoption of aid and protective measures, which stimulate the use of capital, assuring for the same more stability and wherever it is possible greater gains. No efforts have been spared to attract capitalists and laborers from Luzon and the Visayas by means of a continuous propaganda, and although the measures at the disposal of the Government do not satisfy all necessities, they have been, however, of positive value to increase the present development of Mindanao and Sulu, making the basis of its greatness and prosperity more and more solidly permanent.

ORGANIZATION.

There have not been great changes during the year that may be given under this heading with the exception of the organization into municipal districts of Quiamba, Daguma, Isulan, Salaman, Lebak, Sebu, Banisilan, and Subpangan,

Province of Cotabato, and the reorganization of the municipality of Parang of the same Province, converting it into a municipal district. This latter change was necessary. The existence of the municipality of Parang depended upon the military garrison stationed thereat, and at the departure of this organization the elements constituting the life of that town were taken away. For this reason it was deemed advisable to reorganize it into a municipal district.

In Davao plans are also being adopted for the organization of municipal districts in remote regions, especially on the western part of the Davao Gulf between the Provinces of Cotabato and Davao.

Municipal districts constitute the first step which succeeds the primitive organization of our people under the leadership of the headmen, and by which they are submitted under a form of government suitable to their moral and material welfare and their habits and customs. There is in each municipal district a president, a vice president, and a councilor for each barrio, all of whom are appointed by the provincial governor.

After the municipal districts the organized municipalities are next in order with an elective vice president and councilors and an appointive president. Under an almost similar organization but politically in a more advanced stage we have municipalities with elective officials including the president. The organization of these latter mentioned municipalities is exactly similar to that of the municipalities of the Provinces in the north.

The provincial boards of the Provinces within the Department are distinct from those found in the north, in that in Mindanao-Sulu the governor and the treasurer are appointed and the third member is elected by the vice presidents and councilors of the municipalities and organized municipal districts. With this exception and of other laws especially enacted to meet local conditions existing in each Province, the provincial organization in the Department is similar in other respects to that of the Provinces in the north.

The Department is a government upon which rests the control and higher immediate supervision of the entire affairs in Mindanao-Sulu. This government initiates and adopts general plans for the material development of the country and the moral, social, and political education of the inhabitants, and for the promotion of the general welfare, the unification of interests, and the amalgamation of the Provinces among themselves and with the rest of the islands. This is its mission, a mission that is vitally necessary to make this country prosperous and at the same time homogenous, a country always united in ideals and sentiments fully prepared to devote itself to the common work.

The Department organization comprises the following Provinces and their subordinate municipal corporations and municipal districts, as set forth in the following table:

PROVINCE OF AGUSAN.

MUNICIPALITIES.

- | | | |
|------------|----------------|---------------|
| 1. Butuan. | 2. Cabadbaran. | 3. Talacogon. |
|------------|----------------|---------------|

MUNICIPAL DISTRICTS.

- | | | |
|----------------|--------------------|-------------------|
| 1. Amparo. | 19. Jabonga. | 37. Remedios. |
| 2. Azpitia. | 20. La Paz. | 38. Rosario. |
| 3. Bahbah. | 21. Las Nieves. | 39. Segunto. |
| 4. Bakingking. | 22. Libertad. | 40. Salvacion. |
| 5. Balete. | 23. Loreto. | 41. San Ignacio. |
| 6. Basa. | 24. Los Arcos. | 42. San Isidro. |
| 7. Baylo. | 25. Maasin. | 43. San Luis. |
| 8. Borbon. | 26. Mamballli. | 44. San Mateo. |
| 9. Bunaguit. | 27. Manila. | 45. San Vicente. |
| 10. Bunawan. | 28. Manpinsahan. | 46. Santa Ines. |
| 11. Concordia. | 29. Martires. | 47. Santa Josefa. |
| 12. Corinto. | 30. Maygatasan. | 48. Santo Tomas. |
| 13. Cuevas. | 31. Milagros. | 49. Trento. |
| 14. Ebro. | 32. Novele. | 50. Tudela. |
| 15. Esperanza. | 33. Nuevo Sibagat. | 51. Verdu. |
| 16. Gracia. | 34. Nuevo Trabajo. | 52. Veruela. |
| 17. Guadalupe. | 35. Patrocinio. | 53. Violanta. |
| 18. Halapitan. | 36. Prosperidad. | 54. Waloe. |

PROVINCE OF BUKIDNON.

MUNICIPALITIES.

- | | | |
|----------------|------------|-------------|
| 1. Impasugong. | 3. Maluko. | 4. Talakag. |
| 2. Malaybalay. | | |

MUNICIPAL DISTRICTS.

- | | | |
|----------------|--------------|---------------|
| 1. Baungon. | 4. Libona. | 7. Maramag. |
| 2. Claveria. | 5. Lourdes. | 8. Napaliran. |
| 3. Ginbaluron. | 6. Malitbog. | 9. Sumilau. |

PROVINCE OF COTABATO.

MUNICIPALITY.

1. Cotabato.

MUNICIPAL DISTRICTS.

- | | | |
|--------------|----------------|----------------------|
| 1. Auang | 14. Gambar | 27. Maganuy |
| 2. Balatikan | 15. Glan | 28. Nuling |
| 3. Balut | 16. Isulan | 29. Parang |
| 4. Banisilan | 17. Kabakan | 30. Pikit-Pagalungan |
| 5. Barira | 18. Kalanganan | 31. Reina-Regente |
| 6. Buayan | 19. Kiamba | 32. Salaman |
| 7. Bugasan | 20. Kidapawan | 33. Sebu |
| 8. Buldun | 21. Kitubud | 34. Silik |
| 9. Buluan | 22. Kling | 35. Subpangan |
| 10. Carmen | 23. Koronadal | 36. Talayan |
| 11. Daguma | 24. Lebak | 37. Tumbau. |
| 12. Dinaig | 25. Libungan | |
| 13. Dulauan | 26. Liguasan | |

PROVINCE OF DAVAO.

MUNICIPALITIES.

- | | | |
|------------|----------|----------------|
| 1. Baganga | 4. Davao | 6. Mati |
| 2. Caraga | 5. Manay | 7. Santa Cruz. |
| 3. Kateel | | |

MUNICIPAL DISTRICTS.

- | | | |
|------------|-------------|------------|
| 1. Guianga | 4. Pantukan | 7. Sigaboy |
| 2. Malita | 5. Samal | 8. Tagum. |
| 3. Monkayo | 6. Saug | |

PROVINCE OF LANAOS.

MUNICIPALITIES.

- | | | |
|-------------|-----------|--------------|
| 1. Dansalan | 2. Iligan | 3. Malabang. |
|-------------|-----------|--------------|

MUNICIPAL DISTRICTS.

- | | | |
|---------------|----------------|------------------|
| 1. Bakulud | 13. Kolambugan | 25. Pantar |
| 2. Balut | 14. Lumbatan | 26. Pantau Ragat |
| 3. Bayang | 15. Madalum | 27. Pualas |
| 4. Binidayan | 16. Madamba | 28. Sagiaran |
| 5. Bubung | 17. Maging | 29. Sungud |
| 6. Buru'un | 18. Mandulug | 30. Tamparan |
| 7. Butig | 19. Marantau | 31. Taraka |
| 8. Ditsan | 20. Maslu | 32. Tatarikan |
| 9. Ganasi | 21. Malundu | 33. Tubaran |
| 10. Gata | 22. Mumungan | 34. Tugaya |
| 11. Kapal | 23. Munai | 35. Uatu. |
| 12. Kapatagan | 24. Nunungan | |

PROVINCE OF SULU.

MUNICIPALITY.

1. Jolo.

MUNICIPAL DISTRICTS.

- | | | |
|---------------|-----------------|------------------|
| 1. Balimbing. | 10. Marungas. | 19. Simunul. |
| 2. Banaran. | 11. Panamau. | 20. Sitangkai. |
| 3. Bung'gau. | 12. Pangutaran. | 21. South Ubian. |
| 4. Gituñg. | 13. Pansul. | 22. Talipau. |
| 5. Kagayan. | 14. Parang. | 23. Tandu. |
| 6. Laparan. | 15. Pata. | 24. Tandubas. |
| 7. Lati. | 16. Patikul. | 25. Tapul. |
| 8. Lu'uk. | 17. Siasi. | 26. Tangkil. |
| 9. Maimbung. | 18. Silangkan. | |

PROVINCE OF ZAMBOANGA.

MUNICIPALITIES.

- | | | |
|-------------|--------------|---------------|
| 1. Dapitan. | 3. Isabela. | 5. Zamboanga. |
| 2. Dipolog. | 4. Lubungan. | |

MUNICIPAL DISTRICTS.

- | | | |
|----------------|------------------|------------------|
| 1. Bangaan. | 6. Malusu. | 11. Sindangan. |
| 2. Kabasalan. | 7. Margosatubig. | 12. Sirawai. |
| 3. Kumalarang. | 8. Panganuran. | 13. Taluksangay. |
| 4. Lamitan. | 9. Sakul. | 14. Tukuran. |
| 5. Malayal. | 10. Sibuko. | |

GENERAL STATEMENT OF CONDITIONS AT THE CLOSE OF THE YEAR.

Apart from economic conditions, the development of which has been greatly accentuated during 1918, it is gratifying to note that, as the fruit of a policy inaugurated five years ago in Mindanao and Sulu, the retirement of the military garrisons from the Provinces of Lanao, Cotabato, and Sulu, which from time immemorial took charge of the maintenance of public order, has been accomplished. This step is radical and politically of essential importance. One well familiar with the conditions of these Provinces can form an idea of the significance of this step. It appears really unbelievable that this could have been possible without the slightest alteration of public order. However, it is a fact that in Lanao as in Jolo, Cotabato, and other islands of the Department there has been observed last year a complete peace which was disturbed only by Sampang and his companions, who during the months of June, July, August, and September, attempted to offer resistance to the authorities of Sulu, but the same has terminated with the surrender of said outlaws in the middle part of September, 1918.

Since the retirement of the military public order has been maintained exclusively by the civil government through the constabulary, which earned a creditable record of excellent work.

The administration of public affairs within the territorial jurisdiction of the Department of Mindanao and Sulu may be briefly summarized as follows:

1. Gradual increase of the powers vested in the provincial and municipal governments for their complete amalgamation with those of the Visayas and Luzon.

2. Filipinization of Government personnel.

3. Complete responsibility of the civil government in the maintenance of public order.

4. Extension of Government control over regions inhabited by Mohammedans and pagans.

5. Continuous development of the natural resources, industry, commerce, and agriculture, and especially cattle raising, which has now received great stimulus.

6. Continuous development of the social, political, and material conditions of the Mohammedans and pagans with their consequent rapid amalgamation with the inhabitants of the other islands.

FINANCE.

Department.—By operation of the appropriation act of 1919, the Department government ceased to be a separate financial entity on December 31, 1918, to become a part of the bureau of non-Christian tribes, thus placing the De-

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partment under the same financial and accounting basis as other subordinate branches of insular bureaus.

As stated in previous reports, the Department is dependent upon appropriations from the insular treasury, from which the following appropriations for general current administrative expenses and for operation of steamship service were made for the year covering this report:

General administrative expenses-----	₱129,042.00
Operation of vessels:	
Steamship <i>Mindanao</i> -----	₱132,488.00
Steamship <i>Tablas</i> -----	132,284.00
Steamship <i>Imam</i> -----	47,158.00
	<hr/>
	311,930.00
Less probable receipts-----	150,000.00
	<hr/>
	161,930.00
 Total insular appropriation-----	 290,972.00
Amount collected from Provinces on account of legal services----	9,530.00
	<hr/>
Total amount available-----	300,502.00
Expenditures during the year were as follows:	
Current expenses, general administration-----	₱149,157.11
Salaries of officers and employees-----	75,608.40
Wages-----	4,023.21
Consumption of materials and supplies-----	7,750.67
Postal, telegraph, telephone, and cable service-----	10,493.30
Traveling expenses of personnel-----	8,266.05
Other service-----	43,020.48
	<hr/>
Maintenance expense-----	4,059.39
	<hr/>
Maintenance of public buildings-----	3,407.63
Maintenance of repairs of equipment-----	651.56
	<hr/>
Commercial and industrial units, vessels-----	246,694.72
Salaries of officers and employees-----	35,628.60
Wages-----	34,733.17
Consumption of materials and supplies-----	146,376.51
Postal, telegraph, and telephone service-----	367.00
Traveling expenses of personnel-----	35.20
Other service-----	9,780.00
Maintenance and repairs service-----	19,774.24
	<hr/>
Total expenditures-----	399,911.22
As shown above, the expenditures exceeded the appropriations by ₱99,409.22, which deficit was covered by appropriations made by the administrative council under the provisions of section 2584 (a) from income derived from the following sources:	
Jolo Arrastre-----	₱1,313.79
Zamboanga Arrastre-----	767.60
Coaling station-----	69,668.13
Steamship operation:	
Steamship <i>Mindanao</i> -----	₱85,156.48
Steamship <i>Tablas</i> -----	98,643.99
Steamship <i>Imam</i> -----	1,591.80
Schooner <i>Mustavit</i> -----	850.00
	<hr/>
	186,242.27
Less estimated amount deducted from budget--	150,000.00
	<hr/>
	36,242.27
Operation of Army transports-----	22,844.34
	<hr/>
Total-----	130,836.13

The Department has exercised the utmost care in curtailing expenditures to a degree compatible with efficiency and good administration, but on account of the exceptional conditions inherent in the administration of the affairs of as vast a territory as Mindanao-Sulu with its heterogenous population there always arise emergency expenditures which must be met to insure a continuity of work and to enable the Government to cope with any situation which may endanger its prestige and retard its development policy not only in economic line but also in the extension of government control. Fortunately the semicommercial activities of the Department has afforded substantial returns to meet the deficiencies of insular appropriations granted the Department, besides permitting the financing of important public works and civic improvements.

Special mention is made in this report of the courtesy of the military authorities in allowing the Department the use of Army transports not otherwise needed for military purposes, for the transportation of commercial cargo, an arrangement which enabled the moving to markets of considerable quantity of lumber and agricultural produce which for lack of commercial transportation were overtaxing the capacity of lumber yards and storehouses to the great prejudice of manufacturers and producers and their dependents, not mentioning the disastrous effect which such dormant stock had on business in general. For this source a profit of ₱22,844.34 was made as shown above.

Provincial and municipal.—The aid from insular funds allotted to the Provinces of the Department "for the extension and maintenance of government control" is as follows:

Agusan	₱55,000
Bukidnon	45,000
Cotabato	90,000
Davao	55,000
Lanao	60,000
Sulu	40,000
Zamboanga	25,000
Total	370,000

The Provinces of the Department, on the other hand, have contributed to the insular government on account of internal revenue collections during the year the sum of ₱626,206.58, which compared with the collections in 1915, amounting to ₱246,754.37, give an increase of ₱379,452.31, or 153.7 per cent.

To better demonstrate in a clear and tangible manner the effective enforcement of taxes made in the Provinces of the Department, the following statements compiled from the administrative reports of provincial treasurers and other available reports have been prepared and are attached herewith:

Comparative statement of internal-revenue collections.

Statements of revenue collections and other receipts, year 1918, for each Province.

Statements of revenue collections and other receipts, year 1915, for each Province.

Summary of revenue collections, insular, provincial, and municipal, year 1918.

Summary of revenue collections, insular, provincial, and municipal, year 1915.

Comparative statement of revenue collections, insular, provincial, and municipal.

In preparing the above statements the income of 1915 has been taken as the basis for comparison, for from that year the same fiscal system prevailing in the regularly organized Provinces has been adopted in anticipation of the eventual elimination of the Department government and the granting of a regular charter to our Provinces and municipalities.

The financial progress reflected in the above statements has exceeded the most optimistic expectations which could have been made by those who framed the program of government in the Department, considering the fact that prior to the establishment of the new régime the inhabitants of Mindanao-Sulu, in the great majority, were not then conscious of their duty to contribute toward the maintenance of government, and they had the belief that taxes constituted an onerous burden which the Government imposed upon them as vassals and subjects. This erroneous conception of the people as regards taxes has been gradually eliminated by the organization of municipal districts which permitted the natives to have direct participation in the management of local govern-

mental affairs, thus giving them opportunity to visualize and comprehend the benefits which the entire community derives from the payment of taxes. As shown in the comparative statement of revenue—insular, provincial, and municipal—the increases of receipts in 1918 as compared with those of 1915 are very encouraging, bringing the per capita tax in Mindanao-Sulu a little below that which existed in 1908 throughout the islands.

If Government management depends upon the number of inhabitants in each region without regard to its territorial extent, then it may be safe to assume that the Provinces of the Department, with very few exceptions, could depend on their income to maintain local governments adequate to exercise a nominal rather than an effective control of affairs; but as the matter of territorial area constitutes an important factor in the development work of a Government as would naturally be the case in Mindanao-Sulu, with such an extensive and unexplored territory to administer and a widely scattered population to control, it will be several years more before our Provinces could be made independent from insular aid, necessary to promote their moral and material progress which will have to be pushed through by the maintenance of an efficient and effective governmental organization and by providing adequate means to carry on the constructive work now in progress to a successful conclusion. After all, insular aid granted to Mindanao-Sulu is nothing more than a productive investment calculated to foster its vast economic possibilities which will bring great material returns to the country in general, at the same time hasten the realization of the desired solidarity and unification of the Filipino people.

Real-property tax.—Before the implantation of the Department government in Mindanao-Sulu the real-property tax was almost limited to the regularly organized municipalities and the nucleus of the non-Christian population, which constitutes the great majority of the inhabitants, hardly had a conception of the significance and purposes of this tax, as evidenced by the fact that in the Province of Bukidnon the same did not exist in 1915.

At the beginning of the year 1915 the same real-property assessment in force in the regularly organized Provinces was adopted and extended throughout the territorial jurisdiction of the Department, and its application has brought about a systematic revision of real property, thereby increasing the revenues of our Provinces and municipalities. Attention is respectfully invited to the attached comparative statements of real-property assessments.

In accordance with Table No. 62 of the Statistical Bulletin No. 1 of the Bureau of Commerce and Industry, the average real-property tax per capita in the Philippine Islands was ₱0.688 in 1917. Comparing it with the average of real-property tax per capita of ₱0.44 in Mindanao-Sulu, as shown in the statement of real-property assessment existing on December 31, 1918, the difference is insignificant.

Summary of revenue collections, insular, provincial, and municipal, Department of Mindanao and Sulu.

Province.	Internal revenue, insular.	Provincial-municipal.		Total.	Popula- tion.	Tax per capita.
		Revenue.	Inc. revenue.			
YEAR 1918.						
Agusan.....	₱39,707.95	₱84,869.56	₱20,658.62	₱145,236.13	65,000	₱2.23
Bukidnon.....	7,535.76	53,022.92	8,928.28	69,486.96	66,000	1.05
Cotabato.....	39,460.01	97,410.32	21,233.57	158,103.90	149,444	1.06
Davao.....	209,079.62	231,538.77	45,694.79	486,313.18	102,800	4.73
Lanao.....	21,792.16	80,267.37	24,442.98	126,502.51	83,711	1.51
Sulu.....	103,923.32	115,601.07	49,364.48	268,888.87	122,750	2.19
Zamboanga.....	204,707.86	281,129.02	74,345.23	560,182.05	133,650	4.11
Total.....	626,206.68	943,839.03	244,667.95	5,814,713.60	723,355	2.51
YEAR 1915.						
Agusan.....	16,102.47	40,337.68	7,823.55	64,263.70	65,000	.99
Bukidnon.....	2,292.59	27,148.78	1,528.45	30,969.82	66,000	.47
Cotabato.....	18,431.30	62,996.81	11,783.79	93,211.90	149,444	.62
Davao.....	50,165.75	92,542.79	20,956.78	163,665.32	102,800	1.59
Lanao.....	12,871.91	66,070.10	25,304.13	104,246.14	83,711	1.24
Sulu.....	44,184.04	69,153.31	44,000.22	157,337.57	122,750	1.28
Zamboanga.....	102,706.31	189,953.39	41,231.72	333,891.42	133,650	2.49
Total.....	246,754.37	548,202.86	152,628.64	947,585.87	723,355	1.31

Comparative statement of revenue collections, insular, provincial, and municipal, Department of Mindanao-Sulu.

Province.	1918		1915		Increase.		
	Amount.	Tax per capita.	Amount.	Tax per capita.	Amount.	Tax per capita.	Per cent.
Agusan.....	P145,236.13	P2.23	P64,263.70	P0.99	P80,973.43	P1.24	126.00
Bukidnon.....	69,486.96	1.05	30,969.82	.47	38,517.14	.60	124.30
Cotabato.....	158,103.90	1.06	93,211.90	.62	64,892.00	.44	69.60
Davao.....	496,313.18	4.73	163,665.32	1.59	332,647.86	3.14	197.00
Lanao.....	126,502.51	1.51	104,246.14	1.24	22,256.37	.27	21.30
Sulu.....	268,888.87	2.19	157,337.57	1.28	111,551.30	.91	70.90
Zamboanga.....	560,182.05	4.11	333,891.42	2.49	226,290.63	1.69	67.77
Total.....	1,814,713.60	2.51	947,585.87	1.31	867,128.73	1.19	91.51

Tax per capita in the Philippine Islands.

[Table No. 57, Statistical Bulletin No. 1, Bureau of Commerce and Industry.]

1908.....	P3,485	1913.....	P4,282
1909.....	3,789	1914.....	3,603
1910.....	4,057	1915.....	4,218
1911.....	4,241	1916.....	4,490
1912.....	4,478	1917.....	5,358

Comparative statement of real-property assessments, Department of Mindanao and Sulu.

TAXABLE.

Province.	1918		1915		Increase.		Percent.	
	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.
Agusan.....	10,254	P1,769,440	7,261	P1,329,720	2,993	P439,720	41	33
Bukidnon.....	12,678	2,101,620	None.	None.	12,678	2,101,620	100	100
Cotabato.....	1,158	878,001	550	425,837	608	452,164	110	106
Davao.....	14,125	9,935,161	3,532	1,702,558	10,593	8,232,603	297	483
Lanao.....	2,062	609,085	1,618	487,130	444	121,955	27	25
Sulu.....	1,668	1,139,010	257	532,255	1,411	606,755	548	113
Zamboanga.....	18,917	9,462,496	12,101	5,929,845	6,816	3,532,651	56	59
Total.....	60,862	25,894,813	25,319	10,407,345	35,543	15,487,468	140	148

EXEMPT.

Agusan.....	4,381	P349,270	950	P196,330	3,431	P152,940	3.61	77
Bukidnon.....	962	117,420	None.	None.	962	117,420	100	100
Cotabato.....	279	126,070	68	33,985	211	92,085	310	271
Davao.....	577	415,279	1,017	220,426	(440)	194,853	(43)	88
Lanao.....	247	68,343	214	87,870	33	(19,527)	15	(22)
Sulu.....	176	95,513	32	31,650	144	63,863	45	201
Zamboanga.....	2,556	1,300,149	1,836	520,836	720	779,313	39	1.49
Total.....	9,178	2,472,044	4,117	1,091,097	5,061	1,380,947	122	126

Real estate assessment on Doc. 1, 1918, Department of Mindanao and Sulu.

Provinces.	Assessed value of real estate.			Real-estate tax.	Per capita.	
	Taxable.	Exempt.	Total.		Value of real estate.	Real-estate tax.
Agusan.....	P1,769,440	P349,270	P2,118,710	P22,118	P32,595	P0.34
Bukidnon.....	2,101,620	17,420	2,119,040	26,270	32,106	.39
Cotabato.....	878,001	126,070	1,004,071	10,975	6,718	.07
Davao.....	9,935,161	415,279	10,350,440	124,190	100,685	1.21
Lanao.....	609,085	68,343	677,428	7,613	8,092	.09
Sulu.....	1,139,010	95,513	1,234,523	14,237	10,066	.11
Zamboanga.....	9,462,496	1,300,149	10,762,645	118,281	80,528	.89
Total.....	25,894,813	2,372,044	28,266,857	323,685	39,077	.44

Statement of revenue collections and other receipts, year 1915.

PROVINCE OF AGUSAN.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P4,329.50	P7,657.00	P3,337.50	P1,070.50	P16,394.50
Real-property tax—					
Current year.....	1,354.31	677.20	2,794.54	.....	4,826.05
Previous years.....	408.19	204.14	820.23	.....	1,432.56
Internal-revenue allotment.....	2,869.64	2,869.64	3,358.20	1,860.04	10,957.52
Weights and measures.....	181.92	.....	187.78	15.40	385.10
Licenses—					
Internal-revenue.....	.....	.....	3,736.25	137.50	3,873.75
Municipal.....	.....	.....	2,418.20	50.00	2,468.20
Total revenue from taxation.....	9,143.56	11,407.98	16,652.70	3,133.44	40,337.68
Incidental revenue:					
Interest on deposits and loans.....	7.50	.....	.....	.....	7.50
Registry of property.....	39.00	.....	.....	.....	39.00
Registry of mining claims.....	94.00	.....	.....	.....	94.00
Draft and transfer premiums.....	7.50	.....	.....	.....	7.50
Recorder's fees.....	8.80	.....	.....	.....	8.80
Fisheries.....	.....	.....	1,984.22	.....	1,984.22
Cattle registration.....	.....	.....	301.00	10.00	311.00
Rents, profits, and privileges.....	.....	.....	2,020.37	.....	2,020.37
Miscellaneous.....	120.63	90.89	50.23	.....	261.75
Fines and penalties—					
Cedulas.....	664.50	129.00	467.50	57.00	1,218.00
Real-property tax.....	165.68	78.03	326.50	.....	570.21
Weights and measures.....	103.33	.....	83.27	7.50	194.10
Licenses—					
Internal-revenue.....	.....	.....	10.00	.....	10.00
Municipal.....	.....	.....	.....	.....	.....
Miscellaneous.....	36.00	.....	1,033.10	28.00	1,097.10
Total incidental revenue.....	1,146.94	297.92	6,276.19	74.50	7,823.55
Other receipts:					
Vessels and launches.....	8,256.77	.....	.....	.....	8,256.77
Telegraph and telephones.....	.....	.....	.....	.....	.....
Transfer of funds.....	.....	572.60	.....	.....	572.60
Miscellaneous.....	14.54	.....	.....	347.52	362.06
Loans repaid to province.....	1,000.00	.....	.....	.....	1,000.00
Aid from insular government.....	6,692.10	6,821.33	.....	.....	13,513.43
Aid from Department governments.....	55,180.89	5,000.00	.....	.....	60,180.89
Total other receipts.....	71,144.30	12,393.93	.....	347.52	83,885.75
Total income.....	81,434.80	24,099.83	22,928.89	3,555.46	132,046.98
SUMMARY.					
Total revenue from taxation.....	9,143.56	11,407.98	16,652.70	3,133.44	40,337.68
Total incidental revenue.....	1,146.94	297.92	6,276.19	74.50	7,823.55
Total revenue receipts.....	10,290.50	11,705.90	22,928.89	3,207.94	48,161.23
Total other receipts.....	71,144.30	12,393.93	.....	347.52	83,885.75
Total income.....	81,434.80	24,099.83	22,928.89	3,555.46	132,046.98

PROVINCE OF BUKIDNON.

Revenue from taxation:					
Cedulas.....	P2,303.00	P4,531.00	.....	P2,303.00	P9,137.00
Internal-revenue allotment.....	2,855.28	2,855.28	.....	5,730.52	11,461.08
Weights and measures.....	59.60	.....	.....	59.60	119.20
Licenses, internal-revenue.....	.....	.....	.....	17.50	17.50
Road tax, Act 1396.....	.....	.....	P6,414.00	.....	6,414.00
Total revenue from taxation.....	5,227.88	7,396.28	6,414.00	8,110.62	27,148.78
Incidental revenue:					
Registry of mining claims.....	28.00	.....	.....	.....	28.00
Cattle registration.....	.....	.....	.....	581.00	581.00
Miscellaneous.....	2.93	474.02	.....	.....	476.95
Fines and penalties—					
Cedulas.....	111.00	140.00	.....	111.00	362.00
Measures.....	17.00	.....	.....	17.00	34.00
Miscellaneous.....	.....	.....	.....	46.50	46.50
Total incidental revenue.....	153.93	614.02	.....	755.50	1,523.45

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF BUKIDNON—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts:					
Land transportation.....	P2,510.99				P2,510.99
Telegraphs and telephones.....	540.00				540.00
Aid from insular government.....	5,159.28	P7,099.27	P225.98		12,484.53
Aid from Department government.....	39,680.88	6,000.00			45,680.88
Transfer of funds.....		4,000.00			4,000.00
Total other receipts.....	47,891.15	17,099.27	225.98		65,216.40
Total income.....	53,277.96	25,109.57	6,639.98	P8,866.12	93,893.63
SUMMARY.					
Total revenue from taxation.....	5,227.88	7,396.28	6,414.00	8,110.62	27,148.78
Total incidental revenue.....	158.93	614.02		755.50	1,528.45
Total revenue receipts.....	5,386.81	8,010.30	6,414.00	8,866.12	28,677.23
Total other receipts.....	47,891.15	17,099.27	225.98		65,216.40
Total income.....	53,277.96	25,109.57	6,639.98	8,866.12	93,893.63

PROVINCE OF COTABATO.

Revenue from taxation:					
Cedulas.....	P4,995.50	P9,981.00	P1,759.00	P3,234.00	P19,969.50
Real-property tax—					
Current year.....	798.42	396.12	1,336.65	120.90	2,652.09
Previous years.....	71.49	35.76	127.97		235.22
Internal-revenue allotment.....	7,909.84	7,909.84	726.21	14,989.76	31,535.65
Weights and measures.....	85.80		68.90	16.90	171.60
Licenses—					
Internal revenue.....			3,612.25		3,612.25
Municipal.....			4,420.50	400.00	4,820.50
Total revenue from taxation.....	13,861.05	18,322.72	12,051.48	18,761.56	62,996.81
Incidental revenue:					
Interest on deposits and loans.....	18.74				18.74
Registry of mining claims.....	36.00				36.00
Draft and transfer premiums.....	210.72				210.72
Recorder's fees.....	1.20				1.20
Fisheries.....			84.00		84.00
Cattle registration.....			140.00	87.00	227.00
Rents, profits, and privileges.....			3,868.38	42.00	3,910.38
Rentals.....	20.00				20.00
Miscellaneous.....	51.17		5,012.97	113.56	5,177.70
Fines and penalties—					
Cedulas.....	119.00	218.00	61.00	60.50	458.50
Real-property tax.....	40.99	20.49	69.15	2.95	133.58
Weights and measures.....	60.45		40.70	19.75	120.90
Miscellaneous.....			1,385.07		1,385.07
Total incidental revenue.....	558.27	238.49	10,661.27	325.76	11,783.79
Other receipts:					
Vessels and launches.....	60.00	9,910.17			9,970.17
Land transportation.....	.80				.80
Telegraphs and telephones.....	.40				.40
Ice plant.....	4,190.89				4,190.89
Provincial hospitals.....	6.00				6.00
Aid from insular government.....	1,043.69	23,649.67		112.28	24,805.64
Aid from department government.....	126,389.98				126,389.98
Total other receipts.....	131,691.76	33,559.84		112.28	165,363.88
Total income.....	146,111.08	52,121.05	22,712.75	19,196.60	240,144.48
SUMMARY.					
Total revenue from taxation.....	13,861.05	18,322.72	12,051.48	18,761.56	62,996.81
Total incidental revenue.....	558.27	238.49	10,661.27	325.76	11,783.79
Total revenue receipts.....	14,419.32	18,561.21	22,712.75	19,087.32	74,780.60
Total other receipts.....	131,691.76	33,559.84		112.28	165,363.88
Total income.....	146,111.08	52,121.05	22,712.75	19,196.60	240,144.48

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF DAVAO.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	₱9,312.50	₱17,125.00	₱6,293.50	₱1,555.00	₱34,286.00
Real-property tax—					
Current year.....	4,759.74	1,572.89	5,233.81	1,015.49	12,581.93
Previous years.....	1,155.33	381.60	1,207.85	290.81	3,025.59
Internal-revenue allotment.....	6,666.56	6,666.56	4,881.78	8,351.82	26,666.20
Weights and measures.....	356.95		274.55	66.30	697.80
Licenses—					
Internal-revenue.....			3,901.80	471.25	4,373.05
Municipal.....			10,565.82	346.70	10,912.22
Total revenue from taxation.....	22,251.08	25,746.05	32,458.79	12,086.87	92,542.79
Incidental revenue:					
Draft and transfer premiums.....	6.50				6.50
Recorder's fees.....	1.55				1.55
Fisheries.....			1,332.48	24.00	1,356.48
Cattle registration.....			4,635.00	252.00	4,887.00
Rents, profits, and privileges.....			5,695.24	.50	5,695.74
Miscellaneous.....	279.50		2,806.00	72.75	3,158.25
Fines and penalties—					
Cedulas.....	463.50	849.00	417.00	4.50	1,734.00
Real-property tax.....	691.62	230.50	783.97	124.62	1,830.71
Weights and measures.....	218.31		164.49	42.49	425.29
Licenses, municipal.....				4.80	4.80
Miscellaneous.....			1,856.46		1,856.46
Total incidental revenue.....	1,660.98	1,079.50	17,690.64	525.66	20,956.78
Other receipts:					
Dock rentals.....		890.00			890.00
Cemetery collections.....			2.50		2.50
Voluntary contributions.....	.50		10.00		10.50
Miscellaneous.....			172.70		172.70
Aid from insular government.....	1,050.00	18,727.11			19,777.11
Aid from Department government.....	153,482.99	6,500.00			159,982.99
Repayment of loans.....	1,250.00				1,250.00
Total other receipts.....	155,763.49	26,117.11	185.20		182,065.80
Total income.....	179,675.55	52,942.66	50,334.63	12,612.53	295,565.37
SUMMARY.					
Total revenue from taxation.....	22,251.08	25,746.05	32,458.79	12,086.87	92,542.79
Total incidental revenue.....	1,660.98	1,079.50	17,690.64	525.66	20,956.78
Total revenue receipts.....	23,912.06	26,825.55	50,149.43	12,612.53	113,499.57
Total other receipts.....	155,763.49	26,117.11	185.20		182,065.80
Total income.....	179,675.55	52,942.66	50,334.63	12,612.53	295,565.37

PROVINCE OF LANAOS.

Revenue from taxation:					
Cedulas.....	₱6,401.50	₱12,673.00	₱6,406.50		₱25,481.00
Real-property tax—					
Current year.....	749.20	374.60	1,494.66		2,618.46
Previous years.....	931.35	231.47	860.12		2,022.94
Internal-revenue allotment.....	7,115.12	7,115.12	13,800.70		28,030.94
Weights and measures.....	118.55		100.40		218.95
Licenses—					
Internal revenue.....			1,324.50		1,324.50
Municipal.....			6,373.31		6,373.31
Total revenue from taxation.....	15,315.72	20,394.19	30,360.19		66,070.10
Incidental revenue:					
Interest on deposits and loans.....	41.32				41.32
Registry of mining claims.....	153.00				158.00
Fisheries.....			596.91		596.91
Cattle registration.....			684.00		684.00
Rents, profits and privileges.....			8,224.88		8,214.88
Miscellaneous.....	11,829.15		1,793.40		13,622.55
Fines and penalties—					
Real-property tax.....	317.98	98.23	370.56		786.77
Miscellaneous.....			1,199.70		1,199.70
Total incidental revenue.....	12,346.45	98.23	12,859.45		25,304.13

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF LANAO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts:					
Vessels and launches.....	₱1,267.24				₱1,267.24
Land transportation.....	1,725.50	₱375.00			2,100.50
Telegraphs and telephones.....	1,008.00				1,008.00
Provincial hospitals.....	1,182.24				1,182.24
Supplies brought into accounts.....	287.82				287.82
Aid from insular government.....	2,942.44	16,279.16			19,221.60
Aid from Department government.....	128,908.52	18,500.00			147,408.52
Repayment of loans.....	3,500.00				3,500.00
Total other receipts.....	140,821.76	35,154.16			175,975.92
Total income.....	168,483.93	55,646.58	₱43,219.64		267,350.15
SUMMARY.					
Total revenue from taxation.....	15,315.72	20,394.19	30,360.19		66,070.10
Total incidental revenue.....	12,346.45	98.23	12,859.45		25,304.13
Total revenue receipts.....	27,662.17	20,492.42	43,219.64		91,374.23
Total other receipts.....	150,821.76	35,154.16			175,975.92
Total income.....	168,483.93	55,646.58	43,219.64		267,350.15

PROVINCE OF SULU.

Revenue from taxation:					
Cedulas.....	₱6,756.00	₱13,479.00	₱2,310.15	₱6,532.00	₱29,077.15
Real-property tax—					
Current year.....	1,275.46	457.06	1,555.91	118.53	3,404.96
Previous years.....	132.57	56.32	96.85	42.57	328.11
Internal-revenue allotment.....	9,220.64	9,220.64	368.56		18,809.84
Weights and measures.....	178.95		155.00	15.75	349.70
Licenses—					
Internal-revenue.....			3,996.25	222.50	4,218.75
Municipal.....			12,666.80	298.00	12,964.80
Total revenue from taxation.....	17,563.62	23,213.02	21,149.52	7,227.15	69,153.31
Incidental revenue:					
Interest on deposits and loans.....	156.48				156.48
Draft and transfer premiums.....	7.13				7.13
Rentals.....	5,639.12		6,472.15		12,111.27
Fisheries.....			17.50	362.08	379.58
Cattle registration.....			1,912.00	6,061.00	7,973.06
Rents, profits and privileges.....			12,163.33	736.17	12,899.50
Miscellaneous.....			4,830.03	2,306.30	7,136.33
Fines and penalties—					
Cedulas.....	629.75	1,165.50	233.00	425.25	2,453.50
Real-property tax.....	51.77	17.96	39.24	21.63	130.60
Weights and measures.....	281.50		260.00	17.05	558.55
Licenses, internal-revenue.....			194.28		194.28
Total incidental revenue.....	6,765.75	1,183.46	26,121.53	9,929.48	44,000.22
Other receipts:					
Vessels and launches.....	846.38				846.38
Provincial shop.....	26.10				26.10
Aid from insular government.....	2,116.15	23,303.32			25,419.47
Aid from Department government.....	130,159.89	42,500.00			172,659.89
Transfer of funds.....				3,131.40	3,131.40
Total other receipts.....	133,148.52	65,803.32		3,131.40	202,083.24
Total income.....	157,477.89	90,199.80	47,271.05	20,288.03	315,236.77
SUMMARY.					
Total revenue from taxation.....	17,563.62	23,213.02	21,149.52	7,227.15	69,153.31
Total incidental revenue.....	6,765.75	1,183.46	26,121.53	9,929.48	44,000.22
Total revenue receipts.....	24,329.37	24,396.48	47,271.05	17,156.63	113,153.53
Total other receipts.....	133,148.52	65,803.32		3,131.40	202,083.24
Total income.....	157,477.89	90,199.80	47,271.05	20,288.03	315,236.77

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF ZAMBOANGA.

Account.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P14,316.50	P27,850.00	P10,783.50	P3,443.00	P56,393.00
Real-property tax—					
Current year.....	9,928.15	4,964.08	19,676.61	10.81	34,579.65
Previous years.....	10,490.33	2,453.12	9,223.26		22,166.71
Internal-revenue allotment.....	9,982.92	9,982.92	12,603.92	7,361.92	39,931.68
Weights and measures.....	446.70		409.75		856.45
Licenses—					
Internal revenue.....			14,650.75		14,650.75
Municipal.....			20,702.65		20,702.65
Road tax, Act 1399.....		125.00			125.00
Cart tax.....			547.50		547.50
Total revenue from taxation.....	45,164.60	45,375.12	88,597.94	10,815.73	189,953.39
Incidental revenue:					
Interest on deposits and loans.....	483.41		525.00		1,008.41
Registry of mining claims.....	4.00				4.00
Draft and transfer premiums.....	43.88				43.88
Judicial fees.....	9.00				9.00
Recorder's fees.....	24.00				24.00
Rentals.....	80.47				80.47
Fisheries.....			1,430.42	69.50	1,499.92
Cattle registration.....			5,037.00		5,037.00
Rents, profits, and privileges.....			8,986.67		8,986.67
Locust collections.....			157.50		157.50
Miscellaneous.....			1,503.25	87.00	1,590.25
Fines and penalties—					
Cedulas.....	2,046.00	3,175.00	1,187.50	740.50	7,149.00
Real-property tax.....	3,523.15	805.35	3,514.42	1.53	7,844.45
Weights and measures.....	603.10		571.00		1,174.10
Licenses, internal-revenue.....			92.50		92.50
Miscellaneous.....			5,630.57		5,630.57
Total incidental revenue.....	6,817.01	3,980.35	29,535.83	898.53	41,231.72
Other receipts:					
Vessels and launches.....	810.56				810.56
Land transportation.....	2,105.60				2,105.60
Telegraphs and telephones.....	3,504.00				3,504.00
Markets and slaughterhouses.....			13,767.17		13,767.17
Industrial operations.....			151.46		151.46
Voluntary contributions.....	15.00				15.00
Supplies brought into account.....	10,150.30				10,150.30
Aid from insular government.....	3,906.36		900.00		4,806.36
Aid from Department government.....	138,597.50	75,011.93	28,570.58		242,180.11
Aid from municipal government.....	1,860.00				1,860.00
Total other receipts.....	160,949.32	75,011.93	43,389.31		279,350.56
Total income.....	212,930.93	124,367.40	161,523.08	11,714.26	510,535.67
SUMMARY.					
Total revenue from taxation.....	45,164.60	45,375.12	88,597.94	10,815.73	189,953.39
Total incidental revenue.....	6,817.01	3,980.35	29,535.83	898.53	41,231.72
Total revenue receipts.....	51,981.61	49,355.47	118,133.77	11,714.26	231,185.11
Total other receipts.....	160,949.32	75,011.93	43,389.31		279,350.56
Total income.....	212,930.93	124,367.40	161,523.08	11,714.26	510,535.67

Comparative statement of internal revenue collections, Department of Mindanao and Sulu.

Province.	1918	1915	Increase.	
			Amount.	Per cent.
Agusan.....	P39,707.95	P16,102.47	P23,605.48	146.5
Bukidnon.....	7,535.76	2,292.59	5,243.17	228.7
Cotabato.....	39,460.01	18,431.30	21,028.71	114.0
Davao.....	209,079.62	50,165.75	158,913.87	316.7
Lanao.....	21,792.16	12,871.91	8,920.25	69.3
Sulu.....	103,923.32	44,184.04	59,739.28	135.2
Zamboanga.....	204,707.86	102,706.31	102,001.55	99.3
Total.....	626,206.68	246,754.37	379,452.31	153.7

Statement of revenue collections and other receipts, year 1918.

PROVINCE OF AGUSAN.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P6,081.50	P11,581.00	P3,583.50	P2,455.50	P23,701.50
Real-property tax—					
Current year.....	5,843.63	1,933.99	6,751.51	2,914.00	17,443.12
Previous years.....	896.64	353.06	1,050.72	538.34	2,838.76
Internal-revenue allotment.....	6,397.48	6,397.48	5,511.68	7,283.28	25,589.92
Weights and measures.....	271.75		218.25	53.50	543.50
Licenses—					
Internal revenue.....			5,000.70	67.50	5,068.20
Municipal.....			9,593.55	91.00	9,684.55
Total revenue from taxation.....	19,491.00	20,265.53	31,709.91	13,403.12	84,869.56
Incidental revenue:					
Interests on deposits and loans.....	4,802.34				4,802.34
Registry of property.....	5.60				5.60
Registry of mining claims.....	58.00				58.00
Draft and transfer premiums.....	268.09		3.30		271.39
Fisheries.....			2,908.35	76.00	2,984.35
Cattle registration.....			561.00	39.00	600.00
Rents, profits, and privileges.....			1,827.37	170.75	1,998.12
Tuition fees.....			930.00		930.00
Fines and penalties—					
Cedulas.....	1,143.75	1,770.50	549.25	594.50	4,058.00
Real-property tax.....	598.70	213.56	658.77	365.89	1,836.92
Weights and measures.....	233.50		151.75	81.75	467.00
Licenses—					
Internal revenue.....			80.00	50.00	130.00
Municipal.....			29.97		29.97
Miscellaneous.....	479.50		2,005.43	2.00	2,486.93
Total incidental revenue.....	7,589.48	1,984.06	9,705.19	1,379.89	20,658.62
Other receipts:					
Vessels and launches.....	132.82				132.82
Telegraph and telephones.....	21.60				21.60
Markets and slaughterhouses.....			1,625.31	68.30	1,693.61
Provincial hospital.....	2,252.19				2,252.19
Miscellaneous.....	1,302.05	85.32	61.86		1,449.23
Voluntary contributions.....			334.00		334.00
Transfer of funds.....	37.75			1,000.00	1,037.75
Aid from insular government.....	172,806.16	43,000.00			215,806.16
Aid from province.....			23,265.00	41,403.99	64,668.99
Total other receipts.....	176,243.73	43,085.32	25,286.17	42,472.29	287,087.51
Total income.....	203,324.21	65,334.91	66,701.27	57,255.30	392,615.69
SUMMARY.					
Total revenue from taxation.....	19,491.00	20,265.53	31,709.91	13,403.12	84,869.56
Total incidental revenues.....	7,589.48	1,984.06	9,705.19	1,379.89	20,658.62
Total revenue receipts.....	27,080.48	22,249.59	41,415.10	14,783.01	105,528.18
Other receipts.....	176,243.73	43,085.32	25,286.17	42,472.29	287,087.51
Total income.....	203,324.21	65,334.91	66,701.27	57,255.30	392,615.69

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF BUKIDNON.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P3,937.00	P7,872.00	P2,860.00	P1,077.00	P15,746.00
Real-property tax, current year.....	3,021.90	1,511.19	6,043.89	.....	10,576.98
Internal-revenue allotment.....	2,625.40	6,525.40	6,692.76	6,858.08	26,101.64
Weights and measures.....	128.35	.....	92.90	35.45	256.70
Licenses—					
Internal revenue.....	.....	.....	5.00	10.00	15.00
Municipal.....	.....	.....	199.10	127.50	326.60
Total revenue from taxation.....	13,612.65	15,908.59	15,893.65	7,608.03	53,022.92
Incidental revenue:					
Interests on deposits and loans.....	1,410.80	.....	.....	.....	1,410.80
Cattle registration.....	.....	.....	992.00	233.00	1,225.00
Rents, profits, and privileges.....	.....	.....	672.50	.....	672.50
Miscellaneous.....	721.06	763.70	128.50	.....	1,613.26
Fines and penalties—					
Cedulas.....	595.50	1,159.00	288.50	307.00	2,350.00
Real-property tax.....	76.37	38.28	152.77	.....	267.42
Weights and measures.....	317.45	.....	314.45	3.00	634.90
Licenses, internal-revenue.....	.....	.....	27.50	.....	27.50
Miscellaneous.....	.....	.....	387.90	339.00	726.90
Total incidental revenue.....	3,121.18	1,960.98	2,964.12	882.00	8,928.28
Other receipts:					
Land transportation.....	6,185.09	2,415.90	.....	.....	8,600.99
Telegraphs and telephones.....	2,126.26	.....	.....	.....	2,126.26
Toll roads and ferries.....	.....	76.76	.....	.....	76.76
Markets and slaughterhouses.....	.....	.....	174.81	17.50	192.31
Aid from insular government.....	110,432.55	48,568.29	8,500.00	.....	167,500.84
Aid from department government.....	25,800.00	.....	.....	.....	25,800.00
Aid from provincial government.....	.....	.....	16,480.00	14,700.00	31,180.00
Transfer of funds.....	.....	4,000.00	.....	.....	4,000.00
Total other receipts.....	144,543.90	55,060.95	25,154.81	14,717.50	239,477.16
Total income.....	161,277.73	72,930.52	44,012.58	23,207.53	301,428.36
SUMMARY.					
Total revenue from taxation.....	13,612.55	15,908.59	15,893.65	7,608.03	53,022.92
Total incidental revenue.....	3,121.18	1,960.98	2,964.12	882.00	8,928.28
Total revenue receipts.....	16,733.83	17,869.57	18,857.77	8,490.03	61,961.20
Total other receipts.....	144,543.90	55,060.95	25,154.81	14,717.50	239,477.16
Total income.....	161,277.73	72,930.52	44,012.58	23,207.53	301,428.36

PROVINCE OF COTABATO.

Revenue from taxation:					
Cedulas.....	P6,807.00	P13,613.00	P732.50	P6,074.50	P27,227.00
Real-property tax—					
Current year.....	2,063.20	671.85	2,805.16	591.31	6,121.52
Previous years.....	161.18	80.64	319.19	3.17	564.18
Internal-revenue allotment.....	14,708.68	14,708.68	528.64	28,708.72	58,664.72
Weights and measures.....	90.95	.....	53.65	37.30	181.90
Licenses—					
Internal-revenue.....	.....	.....	1,714.50	.....	1,714.50
Municipal.....	.....	.....	2,934.50	12.00	2,946.50
Total revenue from taxation.....	23,821.01	29,074.17	9,088.14	35,427.00	97,410.32
Incidental revenue:					
Interest on deposits and loans.....	1,553.30	.....	.....	.....	1,553.30
Registry of property.....	226.64	.....	.....	.....	226.64
Registry of mining claims.....	300.00	.....	.....	.....	300.00
Draft and transfer premiums.....	417.94	.....	.....	.....	417.94
Fisheries.....	.....	.....	226.38	120.00	346.38
Cattle registration.....	.....	.....	294.00	1,793.00	2,087.00
Rents, profits, and privileges.....	.....	.....	2,947.96	45.81	2,993.77
Rentals.....	366.49	.....	.....	.....	366.49
Miscellaneous.....	7,710.17	2,175.77	19.85	248.88	10,155.67
Fines and penalties—					
Cedulas.....	304.00	607.00	72.00	235.75	1,218.75
Real property tax.....	151.52	55.75	235.54	23.81	466.62
Weights and measures.....	96.00	.....	40.75	51.50	188.25

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF COTABATO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Incidental revenue—Continued.					
Licenses, municipal.....			P 266.56		P 266.56
Miscellaneous.....	P 1.04		645.16		646.20
Total incidental revenue.....	11,127.10	P 2,838.52	4,748.20	P 2,519.75	21,233.57
Other receipts:					
Vessels and launches.....	3,318.97	395.00			3,713.97
Telegraphs and telephones.....	2,202.10				2,202.10
Markets and slaughterhouses.....			3,544.29	1,461.62	5,005.91
Provincial hospitals.....	4,086.47				4,086.47
Toll roads.....		373.93			373.93
Miscellaneous.....	498.78	1,267.87			1,766.65
Transfer of funds.....		1,000.00			1,000.00
Aid from insular government.....	212,957.00	54,084.76	116.12	500.00	267,657.88
Aid from Department government.....	14,700.00			34,360.00	49,060.00
Aid from municipal governments.....	13,500.00	500.00			14,000.00
Total other receipts.....	251,263.32	57,621.56	3,660.41	36,321.62	348,866.91
Total income.....	286,211.43	89,534.25	17,496.75	74,268.37	467,510.80
SUMMARY.					
Total revenue from taxation.....	23,821.01	29,074.17	9,088.14	35,427.00	97,410.32
Total incidental revenue.....	11,127.10	2,838.52	4,748.20	2,519.75	21,233.57
Total revenue receipts.....	34,948.11	31,912.69	13,836.34	37,946.75	118,643.89
Total other receipts.....	251,263.32	57,621.56	3,660.41	36,321.62	348,866.91
Total income.....	286,211.43	89,534.25	17,496.75	74,268.37	467,510.80

PROVINCE OF DAVAO.

Revenue from taxation:					
Cedulas.....	P 14,816.25	P 20,632.50	P 10,754.50	P 3,813.75	P 59,017.00
Real-property tax—					
Current year.....	17,531.89	5,839.24	23,272.22	5,552.28	52,195.63
Previous years.....	7,659.98	2,555.59	9,283.83	1,861.85	21,359.35
Internal-revenue allotment.....	10,117.84	10,117.84	9,496.06	5,728.20	35,459.94
Weights and measures.....	709.05		562.80	132.45	1,404.30
Licenses—					
Internal-revenue.....			10,780.00	1,392.00	12,172.00
Municipal.....			40,861.05	52.50	49,903.55
Shell fishing.....	50.00				50.00
Total revenue from taxation.....	50,885.01	48,145.17	113,975.56	18,533.03	231,538.77
Incidental revenue:					
Interest on deposits and loans.....	2,463.93				2,463.93
Registry of property.....	423.57				423.57
Draft and transfer premiums.....	438.41				438.41
Fisheries.....			1,510.64	243.05	1,753.69
Cattle registration.....			5,363.00	1,590.00	6,953.00
Rents, profits, and privileges.....			3,716.95	18.00	3,734.95
Miscellaneous.....	512.79	4,771.80	7,959.30	10.60	13,254.49
Fines and penalties—					
Cedulas.....	1,448.25	2,896.50	1,109.75	299.00	5,753.50
Real-property tax.....	770.82	257.00	814.48	346.12	2,188.42
Weights and measures.....	708.32		584.83	102.25	1,395.40
Licenses—					
Internal-revenue.....			240.00	5.00	245.00
Municipal.....			30.00		30.00
Miscellaneous.....			7,047.33	13.10	7,060.43
Total incidental revenue.....	6,766.09	7,925.30	28,376.28	2,627.12	45,694.79
Other receipts:					
Vessels and launches.....	13,499.56	471.30			13,970.86
Land transportation.....		1,324.75			1,324.75
Telegraphs and telephones.....	10,776.00				10,776.00
Markets and slaughterhouses.....			5,192.15	53.10	5,245.25
Provincial hospitals.....	528.00				528.00
Cemetery collections.....			747.20		747.20
Voluntary contributions.....	3,108.50				3,108.50
Miscellaneous.....	580.15	96.50			676.65

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF DAVAO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts—Continued.....					
Aid from insular government.....	₱216,256.77	₱75,744.31			₱292,001.08
Aid from Department government.....	21,500.00				21,500.00
Aid from provincial government.....			₱17,150.00	₱21,350.00	38,500.00
Aid from municipal government.....	9,600.00				9,600.00
Total other receipts.....	275,848.98	77,636.86	23,089.35	21,403.10	397,978.29
Total income.....	333,500.08	133,707.33	165,441.19	42,563.25	675,211.85
SUMMARY.					
Total revenue from taxation.....	50,885.01	48,145.17	113,975.56	18,533.03	231,538.77
Total incidental revenue.....	6,766.09	7,925.30	28,376.28	2,627.12	45,694.79
Total revenue receipts.....	57,651.10	56,070.47	142,351.84	21,160.15	277,233.56
Total other receipts.....	275,848.98	77,636.86	23,089.35	21,403.10	397,978.29
Total income.....	333,500.08	133,707.33	165,441.19	42,563.25	675,211.85

PROVINCE OF LANAO.

Revenue from taxation:					
Cedulas.....	₱9,127.00	₱18,217.00	₱9,127.00	(1)	₱36,471.00
Real-property tax—					
Current year.....	1,769.10	589.70	2,941.90	(1)	5,300.70
Previous years.....	135.24	44.99	231.54	(1)	411.77
Internal-revenue allotment.....	8,239.04	8,239.04	10,478.12	(1)	32,956.20
Weights and measures.....	80.85		55.85	(1)	136.70
Licenses—					
Internal-revenue.....			1,254.25	(1)	1,254.25
Municipal.....			3,736.75	(1)	3,736.75
Total revenue from taxation.....	19,351.23	27,090.73	33,825.41	(1)	80,267.37
Incidental revenue:					
Interest on deposits and loans.....	3,624.72			(1)	3,624.72
Registry of property.....	12.00			(1)	12.00
Draft and transfer premiums.....	15.35			(1)	15.35
Rentals.....	4,907.39			(1)	4,907.39
Fisheries.....			1,468.80	(1)	1,468.80
Cattle registration.....			2,452.00	(1)	2,452.00
Rents, profits, and privileges.....			2,786.03	(1)	2,786.03
Tuition fees.....			604.00	(1)	604.00
Miscellaneous.....	1,331.35	1.50	295.33	(1)	1,628.18
Fines and penalties—					
Cedulas.....	1,071.50	2,108.00	1,071.50	(1)	4,249.00
Real-property tax.....	202.80	67.57	338.26	(1)	608.63
Weights and measures.....	16.00		41.00	(1)	57.00
Licenses, internal-revenue.....			.25	(1)	.25
Miscellaneous.....			2,029.63	(1)	2,029.63
Total incidental revenue.....	11,181.11	2,175.07	11,086.80	(1)	24,442.98
Other receipts:					
Vessels and launches.....	4,721.65			(1)	4,721.65
Land transportation.....	5,320.23			(1)	5,320.23
Telegraphs and telephones.....	4,008.88			(1)	4,008.88
Markets and slaughterhouses.....			4,935.11	(1)	4,935.11
Provincial hospitals.....	3,476.48			(1)	3,476.48
Laboratories.....	1,186.57			(1)	1,186.57
Voluntary contributions.....			2.50	(1)	2.50
Ice plant.....	668.43			(1)	668.43
Provincial shop.....	93.20			(1)	93.20
Waterworks.....	684.11			(1)	684.11
Miscellaneous.....	914.34	65,437.07		(1)	914.34
Aid from insular government.....	182,763.05		54,505.00	(1)	302,705.12
Aid from Department government.....	10,700.00			(1)	10,700.00
Aid from municipal government.....	4,500.00			(1)	4,500.00
Total other receipts.....	219,034.94	65,437.07	59,442.61	(1)	343,914.62
Total income.....	249,567.23	94,702.87	104,354.82	(1)	448,624.97

¹ Included in municipal fund.

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF LANA O—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
SUMMARY.					
Total revenue from taxation.....	P19,351.23	P27,090.73	P33,825.41	(1)	P80,267.37
Total incidental revenue.....	11,181.11	2,175.07	11,086.80	(1)	24,442.98
Total revenue receipts.....	30,532.34	29,265.80	44,912.21	(1)	104,710.35
Total other receipts.....	219,034.94	65,437.07	59,442.61	(1)	343,914.62
Total income.....	249,567.28	94,702.87	104,354.82	(1)	448,624.97

PROVINCE OF SULU.

Revenue from taxation:					
Cedulas.....	P13,170.00	P26,150.00	P1,051.50	P12,023.50	P52,395.00
Real-property tax—					
Current year.....	2,192.01	678.37	3,437.54	124.35	6,432.27
Previous years.....	193.86	130.78	288.03	151.34	769.01
Internal-revenue allotment.....	12,081.36	12,081.36	811.98	11,540.04	36,514.74
Weights and measures.....	218.60		182.00	36.60	437.20
Licenses—					
Internal-revenue.....			3,514.75		3,514.75
Municipal.....			12,019.00	677.00	12,696.00
Shell-fishing, Act 2604.....	2,780.00				2,780.00
Sponge fishing.....				62.10	62.10
Total revenue from taxation.....	30,640.83	39,040.51	21,304.80	24,614.93	115,601.07
Incidental revenue:					
Interest on deposits and loans.....	181.23				181.23
Registry of property.....	342.22				342.22
Draft and transfer premiums.....	277.46				277.46
Rentals.....	3,889.44				3,889.44
Fisheries.....			7.50	527.50	535.00
Cattle registration.....			823.00	8,133.00	8,956.00
Rents, profits, and privileges.....			4,159.44		4,159.44
Miscellaneous.....	10,475.80	1,103.23	6,886.71	3,857.35	22,323.09
Fines and penalties—					
Cedulas.....	1,747.25	3,589.00	131.25	1,663.25	7,133.75
Real-property tax.....	141.63	48.30	207.87	26.67	424.47
Weights and measures.....	79.35		66.35	13.00	158.70
Shell-fishing, Act 2604.....	25.00				25.00
Miscellaneous.....			116.10	845.58	961.68
Total incidental revenue.....	17,159.38	4,740.53	12,398.22	15,066.35	49,364.48
Other receipts:					
Vessels and launches.....	32,231.60				32,231.60
Land transportation.....	3,351.03	5,089.25			8,440.28
Telegraphs and telephones.....	4,543.36				4,543.36
Waterworks, Jolo.....			3,758.63		3,758.63
Markets and slaughterhouses.....			19,450.04	9,845.22	29,295.26
Provincial hospitals.....	7,509.52				7,509.52
Provincial shop.....	897.72				897.72
Miscellaneous.....	230.42				230.42
Aid from insular government.....	154,652.50	60,000.00		56,310.00	270,962.50
Aid from Department government.....	60,305.00	25,000.00			85,305.00
Aid from municipalities.....	35,419.79		11,000.00		46,419.79
Transfer of funds.....	1,605.59		5,774.95		7,380.54
Total other receipts.....	309,746.53	90,089.25	39,983.62	66,155.22	496,974.62
Total income.....	348,546.74	133,870.29	73,686.64	105,836.50	661,940.17
SUMMARY.					
Total revenue from taxation.....	30,640.83	39,040.51	21,304.80	24,614.93	115,601.07
Total incidental revenue.....	17,159.38	4,740.53	12,398.22	15,066.35	49,364.48
Total revenue receipts.....	47,800.21	43,781.04	33,703.02	39,681.28	164,965.55
Total other receipts.....	309,746.53	90,089.25	39,983.62	66,155.22	496,974.62
Total income.....	348,546.74	133,870.29	73,686.64	105,836.50	661,940.17

¹ Included in municipal fund.

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF ZAMBOANGA.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	₱18,305.25	₱35,782.50	₱11,665.00	₱6,596.25	₱72,319.00
Real-property tax—					
Current year.....	29,017.13	9,677.42	47,260.90	1,127.25	87,082.70
Previous years.....	6,016.17	2,102.40	9,144.52	129.09	17,392.18
Internal-revenue allotment.....	13,154.20	13,154.20	19,827.72	8,641.52	54,277.64
Weights and measures.....	531.05		491.90	39.15	1,062.10
Licenses—					
Internal-revenue.....			15,553.75	65.00	15,618.75
Municipal.....			31,995.15	374.00	32,369.15
Sponge fishing.....	86.25		86.25		172.50
Shell fishing.....	835.00				835.00
Total revenue from taxation.....	67,945.05	60,716.52	135,525.19	16,942.26	281,129.02
Incidental revenue:					
Interest on deposits and loans.....	3,804.79				3,804.79
Registry of property.....	6,158.79				6,158.79
Draft and transfer premiums.....	388.60				388.60
Recorder's fees.....	107.00				107.00
Fisheries.....			2,011.61	576.63	2,588.24
Cattle registration.....			4,332.00	4,092.00	8,424.00
Rents, profits, and privileges.....			8,666.26	34.86	8,701.12
Miscellaneous.....	10,217.01		1,713.59	788.76	12,719.36
Fines and penalties—					
Cedulas.....	4,412.75	8,112.50	2,609.75	1,817.00	16,952.00
Real-property tax.....	2,236.76	770.44	3,475.93	64.64	6,547.77
Weights and measures.....	349.80		306.35	44.45	699.60
Licenses, internal-revenue.....			631.15	3.75	634.90
Miscellaneous.....	4.31		6,155.95	458.74	6,619.06
Total incidental revenue.....	27,679.81	8,882.94	29,901.59	7,880.83	74,345.23
Other receipts:					
Vessels and launches.....	6,190.16				6,190.16
Land transportation.....	3,350.00				3,350.00
Telegraphs and telephones.....	18,274.42				18,274.42
Markets and slaughterhouses.....			27,863.40	755.97	28,619.37
Waterworks.....			9,282.88		9,282.88
Provincial hospitals.....	5,772.37				5,772.37
Voluntary contributions.....			4,779.85		4,779.85
Miscellaneous.....	1,056.83	1.62			1,058.45
Aid from Insular government.....	138,594.79	77,510.82	3,488.75		219,594.36
Aid from Department government.....	431,632.04	985.00			432,617.04
Aid from provincial government.....				46,319.61	46,319.61
Aid from municipal government.....	9,972.46				9,972.46
Total other receipts.....	614,843.07	78,497.44	45,414.88	47,075.58	785,830.97
Total income.....	710,467.93	148,096.90	210,841.66	71,898.67	1,141,305.22
SUMMARY.					
Total revenue from taxation.....	67,945.05	60,716.52	135,525.19	16,942.26	281,129.02
Total incidental revenue.....	27,679.81	8,882.94	29,901.59	7,880.83	74,345.23
Total revenue receipts.....	95,624.86	69,599.46	165,426.78	24,823.09	355,474.25
Total other receipts.....	614,843.07	78,497.44	45,414.88	47,075.58	785,830.97
Total income.....	710,467.93	148,096.90	210,841.66	71,898.67	1,141,305.22

PUBLIC ORDER.

The year 1918 has been a year that proved the success of public-order maintenance in Mindanao-Sulu. With the withdrawal of the military in the last month of 1917, breaking up the garrisons at Ludlow Barracks, Parang, Cotabato (two battalions); Augur Barracks at Asturias, Jolo, Sulu (two battalions), and Camps Keithley and Overton, Lanao (two battalions), leaving only one battalion at Pettit Barracks, Zamboanga, the maintenance of public order has been left entirely in the hands of the constabulary, and within their respective sphere of action of the local peace officers. The trial has given happy results and has demonstrated that the constabulary is an organization entirely capable of controlling the situation and imposing a government of law and order.

However, the fact should not be lost sight of that, as a fruit of the policy of persuasion worked out happily some years ago, there is now observed among Mohammedans and pagans a clear idea of government and greater respect of law and love of peace and order. This fact is fundamental in the matter of public order.

Of the principal events which have been registered during the year may be mentioned the following:

Agusan.—On October 23, 1918, a patrol of constabulary soldiers, under Lieut. Roska, killed Bagani Mambuanag and a number of his people, capturing many important members of his band and one carbine in good condition. Mambuanag was a chief of a group of bandits who had been, during the first months of 1918, raiding the inhabitants of Alto Maasam, Adgawan, and Umayam, killing some people in said places. With his death the region of Umayam has been cleaned of powerful bandit chiefs.

Bukidnon.—Toward the month of August, 1918, there was formed in Dagumbaan and Kulaman, Bukidnon, a band of fanatics headed by one Datu Inda, who has succeeded in winning a fame as a messenger from heaven, enabling him in this manner to gather about 200 fanatic persons in the neighborhood and were holding continuous gatherings in Dagumbaan, at times robbing cattle to feed the band. Although the gatherings were peaceful, they, however, assumed such increment that they could in a certain way place in danger the preservation of public order. For this reason the authorities of Bukidnon took action against the band, and under the command of Capt. Padua and Lieut. Gaviola of the constabulary, they succeeded in capturing Inda and dispersing the band about the middle of the said month of August.

Davao.—On January 3, 1918, a constabulary corporal named Mohamad, during an attack of madness killed the wife of Sergt. Ibalio, a Japanese, two Chinese, and one Filipino, and wounded some others. Two days later he was killed by a constabulary detachment.

In February, 1918, 12 members of one family of Mansacas were killed by a group of bandits of the same tribe under Giansay and Calumpang. Some days later the constabulary succeeded in killing five of these bandits, but the rest had escaped. This killing of Mansacas is a manifestation of the sentiments of vengeance which is sometimes registered in remote regions like the interior of Mindanao.

On February 15 Lieut. Ilustre arrested for illegal entry to Davao five Japanese who arrived at Mati on a schooner.

On October 3, 1918, a Moro named Damiano Daya killed near the constabulary headquarters two women and one small girl, but was killed on the spot by the constabulary.

Lanao.—On the night of February 5 two Moro constabulary soldiers deserted their company and carried away with them six Krag, with a hundred rounds of ammunition. These deserters, with Datu Tumanong and his relatives, formed a small band in Munai. The band has now been destroyed and the rifles recovered, Deputy Gov. Makarimbang, of Ganassi, and Datu Minor, of Munai, having taken very active and important part in the cleaning out of this band.

Sulu.—On March 12 five Salips and eight companions went to the dock of Kagayan de Sulu and when required to hand in their arms they refused, and thereupon a fight ensued between the bandits and the government authorities, the latter being headed by Deputy Gov. Guy Strattan, and as a consequence thereof four Salips died and the rest escaped. Three of whom later on have been captured by the constabulary.

Sampang and his brother Juaini and five companions refused to obey the sentence imposed upon them by the court of first instance of Sulu in April, 1918, and as a consequence of this refusal they ran away into the forest and there formed an armed band with the object of offering resistance against the forces of the government. As a result of this, there sprang up a difficult situation in Jolo. There arose the necessity of increasing with two more companies the constabulary forces, to assure the successful result of operations. Kassim, companion of Sampang, formed another band which operated in Talipau, and this band was the one that killed Mariano Garcia and a Chinese in Tulay, Jolo. Unaid also formed another band in Silangkan, although this band had no direct intelligence with that of Sampang. Said band at Silangkan was the one that attacked Tanjung and there killed the foreman of Sandy Schuck, bringing away with them his shotgun. The campaign lasted three months and a half (June, July, August, and September), during which there have taken place encounters between the constabulary and the bandits, which resulted, up to the 1st of

August, 1918, in the elimination of 49 bandits, 31 of whom were killed and 18 captured.

After the 1st of August Kassim Salip Bai and one companion, who were the leaders of the Talipau band, were killed. By means of a well-laid out plan, in which the provincial authorities, the constabulary of Jolo, Panglima Unga, Col. Waloe, and the undersigned took part, the surrender of Sampang, his brother Juaini, and five companions, who are now suffering imprisonment in San Ramon, has been effected. A detailed report on this matter has been opportunely submitted.

On February 21 Lieut. Ventura, upon arresting five Moro gamblers in the island of Siasi, was killed by these Moros, and Pvts. Severino Urban and Silvestre Galan were seriously wounded.

On July 17 five Moros of the island of Lugus, Siasi, forming a small band under the command of one schoolboy named Ismula, had an encounter with the constabulary, and as a result of which Corpl. Bucao has been wounded and his Krag taken away by the bandits who later on had united with Unald at Silangkan. These bandits, however, have been later on (August, 1918) captured and the carbine recovered.

On the same island of Lugus a band composed of four Moros attacked at daybreak of September 25 a small constabulary patrol and killed Lieut. La Roche and Sergt. Pedro Gragasín and seriously wounded Pvts. Dalmacio Escaburto and Crispulo Elores. The four Moros have been killed. Angang, companion of these four Moros, who succeeded in escaping during the affray from the place where he was held as prisoner by the soldiers, surrendered on November 18, 1918, to the constabulary at Siasi.

On December 12 Panglima Indanan was captured for possessing opium and he is, up to the present, in Zamboanga under bail, waiting the hearing of his case before the court of first instance of Sulu.

Zamboanga.—On June 13, 1918, a Moro named Karamang, by reason of family trouble and suffering from an attack of acute madness, killed three persons and wounded five at the Zamboanga market. He was killed at store No. 34, of Calle Magay, Zamboanga.

On July 23, 1918, Marcelino Basan and Bernabe Kamapili, while hunting in the island of Basilan, were attacked and killed by two Moros named Awalul and Lahi. A constabulary force under Capt. Misa conducted a campaign against them and killed Lahi some time later. Awalul succeeded in escaping and his whereabouts is still unknown. As a result of these expeditions it has been discovered that in the island of Cailunga, southeast of Basilan, there were Moros who, upon being required to surrender their arms illegally possessed by them, offered resistance and attacked the soldiers. In view of this act, Capt. Misa, with Lieut. Dumlao and 20 soldiers, in company with Datu Cuevas, had an encounter on September 27, 1918, with these rebellious Moros, and as a result of which a constabulary soldier was wounded and seven Moros killed.

These were the principal events during the year. There have been other crimes and events, but they were not of such importance as to deserve mention in this report.

JUSTICE.

Justice in the Department of Mindanao and Sulu is administered under the jurisdiction of the following judicial districts: The twenty-fourth judicial district, comprising the Provinces of Surigao and Agusan; the twenty-fifth, comprising Misamis, Bukidnon, and Lanao; and the twenty-sixth, comprising Zamboanga, Sulu, Davao, and Cotabato. Over each of these districts presides a judge of the court of first instance, with the exception of the twenty-sixth judicial district, which has a permanent judge and an auxiliary judge. The tragic death of Judge Reyes by the wreck of the Steamship *Quantico*, on December 25, 1918, has created a great gap in the administration of justice in the department, and the vacancy is still unfilled, but it is being temporarily occupied by the Hon. Francisco Soriano, auxiliary judge, who is holding sessions in his district.

In each capital of the seven Provinces in the Department a justice of the peace is appointed. He must be a lawyer, but is not allowed to engage in private practice. Governors of the Provinces are also justices of the peace in the territories inhabited by Mohammedans and pagans, and deputy governors perform the duties of ex officio auxiliary justice of the peace in the same regions. Under Act No. 2664 municipal district presidents perform the duties and exer-

cise the powers of justices of the peace in cases involving violation of ordinances and in the absence of the justice of the peace proper. The procedure followed in other organized municipalities in requiring justices of the peace to pass the prescribed examination before appointed to office is observed throughout the Department in municipalities other than provincial capitals.

Arrangements have been made empowering the assistant attorneys of Lanao and Sulu to act as ex officio register of deeds, and which duties should be performed by the justices of the peace in the capitals of the Provinces of Cotabato and Davao, as they are now in Bukidnon and Agusan. In this case the justices of the peace should be paid, aside from their regular monthly salary, an additional compensation of ₱25. In Zamboanga this position will be under the control of the Department attorney, who at present exercises supervision over all matters relating to the registration of deeds throughout the Department.

The provisions of the Penal Code, the Civil Code, etc., applicable in other Provinces of the islands, are also in force in the Department of Mindanao and Sulu, with the exception of those established by Act No. 2520, which authorize the courts to decide cases when the parties involved are Mohammedans or pagans, in accordance with their laws or customs recognized in the locality.

During the year 1918, 541 criminal cases have been registered in the court of first instance, as against 550 in 1917, and 67 land-registration cases, as against 54 in 1917. The total collection of fees by registers of deeds amounted to ₱4,399.08, as against ₱480.20 in 1917.

There is at present felt the lack of legislation regarding the marriages between the Mohammedans in this Department. The Supreme Court of the Philippine Islands in the case of the United States *v.* Tubban (13 Off. Gaz., p. 426), said:

"We are not advised of any provision of law which recognizes as legal a tribal marriage of so-called non-Christians or members of uncivilized tribes celebrated within the Province without compliance with the requisites prescribed by General Orders No. 68."

In view of the above decision of the supreme court, it is very hard for the offended parties in this department to institute prosecutions for adultery committed by the Mohammedans or non-Christians, who have been married in accordance with their own customs only and not in accordance with the provisions contained in General Orders, No. 68, above mentioned. It is, therefore, suggested that a law be enacted prescribing the conditions and requisites in which such marriages may be regarded as valid before the law. The only objection that may be offered against this recommendation is that a legislation of this kind may affect the political objective by serving as an obstruction in the desired amalgamation and union. I have been thinking of this important question, but present circumstances point to the wisdom of adopting these remedies. However, at the end of 10 years more I feel assured that the present problems which have arisen from the observance of the customs, laws, and rites of the Mohammedans will have been lessened in such a way that no difficulty will be encountered in submitting them to the same general legislation in force throughout the Philippine Islands.

Another deficiency noted is that the Administrative Code had repealed Act No. 2409 which gave the justices of the peace of the capitals in the Department the same powers as those of the northern Provinces. The judges of the twenty-sixth judicial district reside in Zamboanga, and only on certain occasions they go to Provinces to hold the ordinary terms of court. Generally, cases arise wherein the judges of the courts of first instance will have to approve bonds or issue injunctions, writs of habeas corpus, prohibitions, etc., and there being no judge of the court of first instance in the capital of the Province it is very hard for the people to get the necessary relief to which they are entitled. I would, therefore, also suggest that a law be enacted by the legislature authorizing the justices of the peace of the capitals here to have jurisdiction over peremptory matters and cases such as enumerated above in the absence of the judges of the courts of first instance.

Before concluding this subject-matter, I wish to mention the fact that the creation of a judicial district in Davao has again been discussed. Judge Reyes was in favor of the idea, but by reason of the existence of a large number of cases in Sulu, he has proposed the consolidation into a district of Davao and that Province instead of Cotabato. This division will create difficulties in communication, and should the organization be carried out, I recommend that Cotabato be consolidated with Davao instead of Jolo and Zamboanga with Jolo and Dapi-

tan. There will be enough work for the judge of Davao in those two Provinces and on the Pacific coast, where by reason of distance many cases have not been brought to court and where court sessions should be held during the months of the South Monsoon.

PUBLIC HEALTH.

The public health has been duly attended to during the year. There exist in the whole Department the following hospitals: General Hospital, Zamboanga; Rizal Memorial Hospital, Dapitan; and the provincial hospitals of Jolo, Cotabato, Lanao, and Agusan. Besides the Government hospitals there exist two private ones in Zamboanga, one that of the Episcopal Church Mission, which is the Zamboanga Hospital, and the other that of the bishop of the Roman Catholic Church, which is the "Hospital Pilar." In Davao a hospital operated by the Congregational Mission also exists. Moreover, the Government has established dispensaries in Bukidnon, Cotabato, and other Provinces in the Department. During the year 2,635 cases have been admitted to hospitals, 49,348 cases and 154,381 treatments have been registered, and 7,484 examinations have been made in the dispensary laboratories. The Zamboanga General Hospital was inaugurated in September, 1918. It is composed of several substantial buildings of modern construction. A new hospital in Butuan, Agusan, is now under construction.

During the year cholera cases have been registered in Lanao, Jolo, and Zamboanga; smallpox in Cotabato, Davao, Lanao, Sulu, and Zamboanga; "influenza" in all Provinces, but Dapitan and Agusan have suffered the most. Many malaria cases have also been registered in Davao, Agusan, and among the new colonists in Lamitan.

The following table demonstrates cases of contagious diseases occurring during the year, which was prepared in the office of the chief, Division of Mindanao and Sulu, Philippine health service. Other data regarding public health can be found in the report of the same chief.

Dangerous communicable diseases registered during the year.

Diseases.	Agusan.		Bukidnon.		Cotabato.		Davao.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Smallpox.....					6,621	461	2,140	372
Varicelloid.....					1,004	56	53	1
Varicella.....	4				1,114	24	108	8
Measles.....							11	
Typhoid.....							19	5
Dysentery.....							57	11
Influenza.....	17,234	308	622	47	4,804	154	1,791	86
Tuberculosis.....					19		15	4
Total.....	17,238	308	622	47	13,562	695	4,194	487

Diseases.	Lanao.		Sulu.		Zamboanga.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cholera.....	78	41			150	110	228	151
Smallpox.....	2,700	164	2	1	308	64	11,771	1,062
Varicelloid.....			3		5		1,065	57
Varicella.....	28		50		28	1	1,832	33
Measles.....			6				17	
Typhoid.....	8	2	1				35	13
Dysentery.....	53	3	11		7	6	121	14
Mumps.....			2				2	
Leptosy.....	10		3				13	1
Influenza.....	22	1	1,403	13	65	16	25,941	625
Tuberculosis.....	39	5	4		34	34	111	43
Total.....	2,938	216	1,485	15	597	231	40,636	1,999

PUBLIC INSTRUCTION.

In the whole Department there are 30 American teachers, of whom the Department superintendent of schools and seven division superintendents are included. There are 785 Filipino teachers. The tables which are hereto attached demonstrate the number and kind of schools, attendance therein, and all data which are necessary in order to give a clear idea of the activities in this branch of public service in Mindanao-Sulu. Toward the middle part of the year 1918, Department Supt. Mr. Glenn W. Caulkins was relieved by Mr. Carl M. Moore, who, imbued with the same profound interest as that taken by his predecessor, is undertaking with deep interest in uplifting the educative work in Mindanao. The difficulties to be encountered are great in these regions. Almost all of the personnel have to be brought down from the north, who with meager salary and with the thought of living in remote and dangerous regions, do not feel inclined to come down to Mindanao. There is yet to add, the lack of communication, opposition on the part of some elements, especially Mohammedans, in sending their children to schools, and other hardships which are numerous, making thereby the conditions unpleasant for teachers in many districts, creating thereby difficulties in the proper selection of a good personnel. However, Department Supt. Mr. Moore is overcoming these difficulties and has accomplished during the year a creditable work in this branch of service.

The undersigned has issued an executive order making attendance at schools compulsory for boys and girls from 7 to 13 years of age and who live within 2 kilometers distance from the schools. In order that indifferent fathers can not escape from this rule or refuse to comply with the provisions, the Executive Order No. 1 has also been issued prohibiting the changing of residence without previous permission from their respective provincial governors. As a result of this procedure there has been noted an increase in attendance of from 4,924 in December, 1917, to 8,423 in December, 1918. The enrollment of Moro girls has also increased from 331 in December, 1917, to 724 in December, 1918. (Memorandum of department superintendent of schools.)

This compulsory measure is going on but with much care on the part of proper authorities so as not to cause any trouble. The old men and panditas believe that through education, especially for women, their customs and prescriptions of their religion will be broken. In this connection protests have been filed by Moro representatives with a view of amending this measure, but instructions to strictly follow the provisions of the order are left in the hands of local officials to comply with. The undersigned is firmly convinced that education is one of the principal ways upon which our social regeneration depends, but this kind of instruction will not be complete without including the teaching of Mohammedan girls. They, who are to be the future mothers, should know better than men in molding and uplifting our future citizens. In view thereof compulsory attendance in schools for girls has been extended to them.

During my inspection trip in the first days of March in Jolo I had the greatest satisfaction in seeing the result of the campaign for the girls' attendance in schools. In the school at South Ubian there are at present 123 girls and 147 boys. A new building capable of accommodating 200 pupils more is now needed there. In the school at Simonol there are 123 boys and 83 girls; 54 boys and 45 girls in Manuc Manca; and 33 boys in Sitangkai, but in this last one all girls will enroll next June, according to the president of the district. This attendance on the part of girls only commenced two months ago. Before in the Tawi-Tawi district there was none. Also in Cotabato, Lanao, and in different places in Zamboanga, this increase in number of girls in schools has been registered. In general, the campaign in this connection has resulted entirely satisfactorily.

Although many schools have been established in the Department, yet there are still many regions not being afforded with this opportunity, as the Sarangani Valley, the regions between Cotabato and Davao, Bukidnon and Lanao, in the interior part of Zamboanga Peninsula, and southern regions of Basilan Island, where schools should be established. It is necessary that school buildings of permanent construction be erected because they are not only very economical, but also will attract people and give important credit to education, thereby the desired objective shall be soon attained. The development of agricultural schools in which field work is taught to boys is also very necessary in Mindanao-Sulu. For the majority of the masses who can not ordinarily afford to send their sons to capitals in order to acquire higher education, this kind of inferior studies, although practical, will answer the

purpose and can be applied to any necessities of life whereby the interested party can get along all right. The old Mohammedan people have an erroneous idea that the school is good only if those who are educated in the same could be immediately employed in public service. For them the ideal of an education is that the interested can take part afterward in public affairs, but this belief will soon disappear with the old generation when the boys of the new generation who receive education under the present system will appreciate the immense benefits to come.

It is also important that constant inducement be given the personnel to better their condition in all that can be done. The teacher in Mindanao-Sulu is a true missionary who is possibly taking the bitterest part of Government constructive labor. Only in this manner could good men be obtained who, besides being good teachers, have enough experience to exert moral influence in the community where they live.

The following tables demonstrate the necessary data in this branch of Government activity during the year 1918:

TABLE No. I.—*Number of schools.*

Kind of schools.	December.	
	1917	1918
Regular primary schools.....	179	180
Settlement farm schools, primary grades.....	96	166
Agricultural schools.....	8	10
Intermediate schools.....	7	14
Trade schools.....	1	1
Secondary schools.....	1	1
Total.....	292	372

TABLE No. II.—*Annual enrollment by nationalities.*

Province.	Dec. 31.										Total in-crease.
	Christian.		Mohammedan.		Pagan.		Others.		Total.		
	1917	1918	1917	1918	1917	1918	1917	1918	1917	1918	
Agusan.....	3,119	2,985	.....	.....	1,624	2,696	16	26	4,759	4,759	948
Bukidnon.....	67	159	24	22	2,861	4,504	.....	.....	2,952	4,685	1,733
Cotabato.....	1,018	1,049	919	1,542	116	108	10	52	2,063	2,751	688
Davao.....	2,242	2,780	643	770	2,156	1,995	48	19	5,089	5,544	455
Lanao.....	1,075	1,148	779	2,089	18	20	2	5	1,874	3,242	1,368
Sulu.....	379	354	1,734	2,968	.....	.....	98	86	2,211	3,408	1,197
Zamboanga.....	4,311	5,036	825	1,054	1,057	1,006	26	18	6,219	7,114	895
Total.....	12,211	13,491	4,924	8,423	7,832	10,329	200	195	25,167	32,438	7,271

TABLE No. III.—*Number of teachers.*

Kind of teachers.	December.	
	1917	1918
Americans.....	20	27
Filipinos:		
Provincial.....	76	24
Municipal district.....	290	446
Municipal.....	227	280
Total Filipinos.....	593	750
Grand total.....	613	772

TABLE No. IV.—*Agricultural work.*

Province.	Number of agricultural and settlement farm schools.	Total value of products harvested, 1918.
Agusan.....	32	P 12,397.97
Bukidnon.....	52	32,286.21
Cotabato.....	14	7,295.47
Davao.....	34	27,874.98
Lanao.....	10	4,758.26
Sulu.....	1	1,065.00
Zamboanga.....	35	1,983.54
Total.....	178	87,641.43

TABLE No. V.—*School and home gardens.*

Province	Number of schools with gardens.	Number of pupils taking gardening.	Number of plots in school gardens	Number of plots in home gardens.	Total value of vegetables harvested.
Agusan.....	14	386	622	58	P 1,014.17
Bukidnon.....	14	886	2,376	586	592.81
Cotabato.....	28	605	1,594	1,373	4,736.22
Davao.....	26	735	1,076	3,431	2,169.22
Lanao.....	23	747	958	214	1,136.60
Sulu.....	16	1,250	2,541	9,163	1,037.49
Zamboanga.....					
Total.....	121	4,609	9,167	14,825	10,686.51

TABLE No. VI.—*Government scholarships.*

Schools attended.	Home Province.							Total.
	Agusan	Bukidnon.	Cotabato.	Davao.	Lanao.	Sulu.	Zamboanga.	
College of Engineering, University of the Philippines.							1	1
College of Agriculture, University of the Philippines, Los Baños.....			1		1		3	5
College of Education, University of the Philippines.						1	1	1
Philippine Normal School.....						1		2
Manila High School.....					1		1	2
Zamboanga High School.....	2		4	4	5		3	23
Central Luzon Agricultural School, Muñoz.....	2		5			3		10
Zamboanga primary schools.....			3				5	10
Jolo primary schools.....					2			2
Total.....	4		13	4	11	10	14	56

TABLE No. VII.—*School libraries.*

Province.	Number of school libraries.	Number of books and pamphlets.	Subscriptions to magazines and periodicals.	Number of persons using libraries.
Agusan.....	6	570	18	618
Bukidnon.....	1	63		100
Cotabato.....	1	225	3	153
Davao.....	1	169	6	77
Lanao.....	2	310	6	138
Sulu.....	2	263	21	162
Zamboanga.....	1	1,248	11	314
Total.....	14	2,848	65	1,562

TABLE NO. VIII.—*The epidemic of Spanish influenza (trancazo).*

Province.	Number attacked.		Number of deaths.		Number of schools closed.
	Teachers.	Pupils.	Teachers.	Pupils.	
Agusan.....	76	3,640	2	90	42
Bukidnon.....	41	2,734		44	29
Cotabato.....	55	1,861		18	7
Davao.....	38	1,676		102	13
Lanao.....	29	910		37	2
Sulu.....	51	1,403	1		3
Zamboanga.....	107	3,416	1	2	3
Total.....	397	15,540	4	293	86

TABLE NO. IX.—*Authorized construction of school buildings.*

Project.	Amount of insular aid.
Zamboanga normal school building, Zamboanga.....	P200,000.00
Mallag agricultural school building, Bukidnon.....	30,000.00
Agusan agricultural school building, Agusan.....	30,000.00
Lapak agricultural school dormitory, Sulu.....	25,000.00
Zamboanga trade school building, Zamboanga.....	25,000.00
Dansalan central school building, Lanao.....	25,000.00
Mampising agricultural school, Davao.....	20,000.00
Zamboanga domestic science building, Zamboanga.....	19,370.00
Dipolog central school building, Zamboanga.....	15,000.00
Cotabato girls' dormitory, Cotabato.....	15,000.00
Davao central school building, Davao.....	15,000.00
Siasi barrio school building, Sulu.....	15,000.00
Balaklasan agricultural school building, Zamboanga.....	15,000.00
Piang agricultural school academic building, Cotabato.....	12,000.00
Piang agricultural school dormitory, Cotabato.....	10,000.00
Baganga central school building.....	10,000.00
Maimbung barrio school building, Sulu.....	10,000.00
Esperanza and Bunaguit settlement farm school buildings, Agusan.....	6,000.00
Lanao barrio school building, Lanao.....	5,000.00
Cotabato barrio school buildings, Cotabato.....	5,000.00
Lanao settlement farm school buildings, Lanao.....	5,000.00
Maimbung barrio school building, Sulu.....	5,000.00
Completion of school buildings under construction in Sulu.....	5,430.00
Linabo settlement farm school building, Bukidnon.....	5,000.00
Impasugong settlement farm school building, Bukidnon.....	5,000.00
Lumbatan agricultural school building, Lanao.....	4,500.00
Kidapawan dormitory buildings, Cotabato.....	3,000.00
Total.....	600,300.00

PRISONS.

There has been no material change during the year to be given under this title. No new prison houses have been constructed, although in Davao certain important improvements have been made on the premises of the building which served as provincial jail. Provincial jails are directly under the control and responsibility of the provincial governor, who appoints the warden and the necessary guards, and the municipal jails are under the control and responsibility of the President, who supervises them through the municipal police. The regulation observed in said jails is the same as that promulgated by the bureau of prisons in Manila. The prison guards wear the prescribed uniform and receive from P20 to P30, while the wardens from P60 to P80 monthly. Prisoners also wear the prescribed uniform, the value of their food fluctuating from 20 to 30 centavos daily. Insular prisoners of the seven Provinces in the Department are sent to the San Ramon penal farm, which serves here, as does the Bilibid prison in Manila, for the northern Provinces. On January 1, 1915, San Ramon penal farm became an insular institution by executive order of the Governor General.

As an experimental system the Province of Zamboanga sends its provincial prisoners of good conduct to the agricultural colony at Lamitan, where, under the responsibility and direction of a superintendent, they devote themselves

to agricultural work, especially in the nurseries, which are utilized as a distribution center of seeds in the locality. The experiment, however, has not as yet produced good results owing to the negligence of Supt. Blanca, who has disastrously administered the colony, and the provincial governor was obliged to take action against him by separating him from the public service.

PUBLIC WORKS.

There has been spent approximately ₱360,000 on public works under the supervision of the supervising engineer's office in the Department during the year 1918. The only balance remaining at the end of the year is that on building projects now under way. Considerable survey work has been accomplished during the year. The Bolong-Curuan section of the east coast road and the Isabela-Lamitan Road have both been surveyed and located. Irrigation projects have been investigated and preliminary data and reports furnished the director of public works.

During the year 1918 there have been several changes made in the personnel of the bureau of public works within the Department. Mr. Newton has been appointed as assistant in the central office at Zamboanga. In Jolo, Cotabato, Agusan, Bukidnon, Lanao, and Davao changes in the engineering personnel have also taken place. By reason of the difficulty in securing the services of a qualified engineer, Mr. Kilby, foreman, has been appointed acting engineer for the last-named Provinces. He has rendered service in this Province for several months, but arrangements are being made for his transfer to another Province. The difficulty in securing qualified men to handle the local engineering work has been largely due to greater prospects for advancement offered by the war to competent civil engineers. Meanwhile the high cost of living in the Provinces, especially in Davao, has created added difficulties. The war, however, has ended and I hope the bureau of public works in Manila will no longer encounter difficulties in the selection of an efficient personnel.

The public works in the Department have also met obstacles in securing laborers from Cebu and other Provinces at a daily wage of from 50 centavos to 1 peso and 20 centavos with subsistence and under the condition that they work for one year, or 275 days, with the promise on the part of the Government to give them homesteads at the conclusion of their term of service. However, the fear of malarial sickness and the idea of living in remote and isolated regions have been the principal factors which hindered the recruitment of laborers. On the other hand, the ease with which laborers could earn their living in private employment, especially with owners of hemp fields, who offered them an average wage of ₱2 a day for work almost independent from the heat of the sun and free from overseers has also contributed to the great difficulty encountered in retaining the services of laborers. Consequently the public works suffered delays.

During the year the immigration of the Moros from Lanao to Davao and Agusan in search of work has been greatly accentuated. Many of these have accepted contracts to work with the Government, and their services have been satisfactory. However, the Department has continued the policy of restricting the immigration of laborers from places where they are needed. Nevertheless the meager assistance which the few immigrants from Lanao contributed to the Provinces in need of laborers could be considered in a way as a factor in the solution of a certain portion of the labor problem in our Provinces.

The following pertinent report of the supervising engineer shows exactly the status of the public works within the Department:

"AGUSAN PROVINCE.

"Roads and trails.—The following amount of road and trail existed in the Province on December 31, 1918: Twelve and six-tenths kilometers first-class road, 5.7 kilometers second-class road, 19.8 kilometers third-class road, 39 kilometers first-class trail, 90 kilometers, approximately, second-class trail.

"There was no increase during the year in first or third class roads. The above includes an increase of 1.5 kilometers of second-class road and 20 kilometers of first-class trail. Regular maintenance on all existing roads and trails was carried on throughout the year. New road construction progressed rather slowly, due to scarcity of labor and the great difficulty in obtaining surfacing materials. Six wooden bridges were strengthened on the Butuan-Cabadbaran Road and materials gotten out for reconstructing and strengthening about 10

more bridges. This road will be opened for light traffic during dry weather as soon as the bridges are completed.

"Telephone lines.—There were 95.6 kilometers of telephone existing in the Province on December 31, 1918, of which 21 kilometers were constructed during the year. A telephone switchboard has been requisitioned, and upon receipt of same a telephone central will be installed, which should greatly improve the service and tend to cause a greater demand for private phones in Butuan and Cabadbaran.

"Buildings.—The Butuan hospital building was started during the year and on December 31 had been completed to above the floor line. All the materials are on hand to complete the building with the exception of a portion of the lumber. This building is to be an attractive modern hospital building with concrete pillars, frame structure, and cement tile roof.

"Materials were requisitioned for an agricultural school building at Ampayon and for an extension to the Butuan school building. Two other new building projects which are to be started in the immediate future are the Cabadbaran municipal building and the Cabadbaran intermediate school building.

"River channels and wharves.—A considerable amount of cleaning was accomplished this year in the river channels of the upper Agusan. The unusually low water greatly aided in the location and removal of submerged tree trunks and snags.

"An insular allotment of ₱2,500 was made available for the extension of the Butuan wharf, and work is just about to be started on the project. Investigations are being made of the channels at the mouth of the Agusan River with the hope that funds will be available during the present year to accomplish some dredging work at this point.

"Artesian wells.—Two wells were drilled during the year by means of a hand rig—one at Las Nieves and the other at San Ignacio. The former proved unsuccessful, but at the latter town a pump well was obtained.

"General remarks.—A considerable amount of survey work and road location was accomplished during the year. There are balances on several road projects due to scarcity of labor, but the Moros are now being induced to work on the roads to a certain extent under the "paquiao" system. It is believed that under the present district engineer, public works and road work especially will be carried on much more economically and much more work accomplished during the present year than during 1918.

"BUKIDNON PROVINCE.

"Roads and trails.—There is no first-class road in the Province. There was, on December 31, 45.5 kilometers of declared second-class road, of which 18 kilometers was declared during 1918. This road is not surfaced but is well graded and maintained by drags, so that it is passable for automobile and cart traffic continuously throughout the year. In addition to this there was, on December 31, 145 kilometers of third-class road, 118 kilometers of first-class trail, and approximately 120 kilometers of second-class trail. During the year a road with maximum grade of 6 per cent was constructed across the Utugan Canyon. This now makes the road passable for auto and carts all the way to Malaybalay with the exception of the Kulaman Canyon, across which it is hoped to construct the road this year. Drags are proving very successful in keeping the earth roads in excellent condition in this Province.

"An 80-foot wooden truss bridge was constructed over the Melupali River and repairs made to a number of other wooden bridges in the Province.

"Telephone lines.—There was no increase in length of telephone lines during the year, but 172 kilometers of lines were maintained. Of this amount 70 kilometers are duplicate lines.

"Buildings.—Materials have been ordered and partly received for quarters for the division superintendent of schools, the Mailag Agricultural School, and two temporary school buildings. Work has been started on the first-named project. All these buildings are to be wooden buildings with galvanized-iron roofs.

"Waterworks.—Work of constructing a waterworks system for Malaybalay was started late in the year and approximately half completed on December 31. This is to be a gravity system furnishing street taps under a low pressure from spring supply.

"General remarks.—The difficulty in transporting materials and supplies across the Kulaman Canyon greatly retards public works projects in Bukidnon

Province. Funds for constructing the road across this canyon should by all means be made available this year, in which case a marked change in the rapidity of construction work is looked for. Mr. Marcelino Angeles, a former foreman in the Province, has recently been made acting district engineer and seems to be taking hold of the work in a most creditable manner.

“COTABATO PROVINCE.

“*Roads and trails.*—The only increase in road and trail during the year was 0.7 kilometers of first-class road. The small amount of new construction accomplished is due to inadequate funds and personnel, and the large amount of trail to be maintained. The existing roads and trails in the Province on December 31, 1918, were as follows: 10.7 kilometers first-class road, 2 kilometers second-class road, 50.5 kilometers third-class road, 169.3 kilometers first-class trail, 224 kilometers (approximate) second-class trail.

“Practically all the above road and trail has been under maintenance during the year. Fifteen temporary wooden bridges have been completed on the various roads and trails in the Province.

“*Telephone lines.*—There has been an increase of 26 kilometers of telephone lines completed during the year. On December 31 there was a total of 296 kilometers of telephone lines under operation, of which 128 kilometers are double or duplicate lines.

“*Buildings.*—A 3-A temporary school building and dormitory, both of timber construction, with galvanized-iron roofs, were completed at Dinaig. Two market buildings, 15 by 50 meters, of timber frame with nipa roofs, were completed at Salumbao and Pikit. The Plang Agricultural School dormitory was started on December 1 and materials ordered for the girls' dormitory building at Cotabato. Both are timber structures with galvanized-iron roofs. It is expected to complete these two buildings by June.

“*Dredging dikes.*—Bureau of public works ladder dredge No. 2 arrived at Cotabato on November 9, 1918, and has since been operating in cutting through the bar at mouth of the Cotabato River. The dredge has been operating at approximately half efficiency, due to lack of a launch for handling scow and due to the fact that only one scow is available. A launch has recently been rented for use with scow, but so far it has proven impossible to obtain another scow from the bureau of public works.

“Two and a half kilometers of a dike between Pikit and Pagalungan have been completed.

“*Artesian wells and waterworks.*—The well started at Dulauan during 1917 proved unsuccessful, and was abandoned in May, 1918, after reaching a depth of approximately 1,700 feet. The well rig was then moved to the town of Cotabato and a well started on Constabulary Hill. On December 31, 1918, the well had reached a depth of 450 feet without any indications of fresh water.

“A small waterworks installation was completed for the Awang School.

“*General remarks.*—There are unexpended balances on the various projects amounting in all to approximately ₱94,000. This is due to the fact that active work on some projects could not be undertaken until equipment was obtained, and the appropriations for several of the building projects were not made available until so late in the year that very little was expended by December 31. The engineering supervision in the Province is of a most excellent quality, and if Mr. Tillet, the present engineer, remains, public works activities will undoubtedly progress most satisfactorily during 1919.

“DAVAO PROVINCE.

“*Roads and trails.*—The principal road and trail work accomplished during the year was grading and improving existing roads and trails, so there is practically no increase other than approximately 20 kilometers of second-class trail which was changed into first-class trail. The 2.8 kilometers of road between Davao and Santa Ana has been widened and portions resurfaced. There was on December 31, 5.8 kilometers of declared first-class road; 102 kilometers of earth road, a portion of which has been declared second-class, but is in reality third-class road; and approximately 525 kilometers of trail, varying from first-class improved trail to entirely unimproved foot trails.

“Four temporary wooden bridges have been rebuilt on the Mati-Boston road, a number of concrete pipe culverts installed, and several other wooden bridges repaired.

"Telephone lines.—Telephone lines were extended 54 kilometers during the year, making a total of 376 kilometers in the Province, exclusive of Davao city lines. Of this 45 kilometers are duplicate lines. The great length of telephone line makes it extremely difficult to maintain and keep all this line open, but every effort is being made to improve the service on the long lines.

"Buildings.—An employees' wooden cottage, with tar-paper roof, has been completed at Davao, and the construction of one or two more is contemplated. A temporary wooden hospital pavilion has been constructed for use until the new hospital can be erected. A hospital site has been obtained and cleared and a portion of the materials for the permanent hospital building requisitioned. This building is to be a duplicate of the Butuan hospital, having concrete pillars and porch and a frame structure. A concrete water tank was installed at the constabulary barracks at Mati and repairs made to the building. Materials have been ordered for a No. 6 wooden school building and teachers' cottage at Mampising. There are quite a number of wooden school buildings to be undertaken during the coming year.

"Wharves.—The Davao Wharf was entirely rebuilt with Liusin piling from the shore out to the tee. Lack of funds held up the work for a time in October and November, but the work is now being rushed.

"Waterworks.—An investigation for a gravity waterworks installation for the city of Davao was made during the year and measurements of flow taken of springs which it is proposed to utilize for a source of water supply. It is hoped funds will be made available to start the project this year.

"General remarks.—Practically all labor has to be imported, and the slowness with which laborers have been furnished has greatly retarded public works projects in Davao. The result is that many of the projects show a considerable balance. Work, however, is now progressing well on many of the projects. A change in personnel of the district engineer's office is contemplated which will, it is believed, insure better results this year.

"LANAO PROVINCE.

"Roads and trails.—The following increases in roads and trails occurred during the year; 6 kilometers first-class road, 7 kilometers third-class road, 26.3 kilometers first-class trail.

"This office has no exact data upon the total length of roads and trails existing on December 31, 1918, except in the case of first-class road, which totaled 14.6 kilometers. The total amount of roads and trails can be obtained by telegraph if same is desired for the Governor's report.

"In addition to the regular maintenance, 9 kilometers of the Overton-Keithley road has been resurfaced. The Overton bridge, a 38-meter combination wooden pile and truss bridge, has been reconstructed. Two wooden pile bridges on the Misamis boundary road were completed and a considerable amount of repair and protection work done to the Iligan concrete ford. In addition to this, a number of small temporary wooden bridges were constructed in connection with new trail construction.

"Telephone lines.—There was a total of 238 kilometers of telephone line existing in the Province on December 31, 1918. There was no increase during the year, but between 50 and 60 kilometers of existing lines were rebuilt and new poles erected.

"Buildings.—The Lumbatan farm school buildings were repaired, painted, and roofed with galvanized iron. Two teachers' cottages, a storehouse, and a bathhouse were also constructed for this school. The provincial commander's residence at Dansalan was completed early in the year. Repairs were also made to the constabulary barracks and officers' quarters at Dansalan.

"Wharves.—The construction of a new wooden wharf at Overton was begun in September, and 200 linear feet of pile bents were driven by December 31. Delay on the part of the contractor in delivering piles has greatly retarded the project. It should, however, be completed within a few months. Upon the completion of the wharf a Government bodega is to be constructed on the shore near the wharf site.

"On Lake Lanao a new approach was built to the Tamparan wharf and additional fender piles driven at this wharf and at the wharves at Lumbatan, Ganassi, and Keithley.

"Hydroelectric investigation, general remarks.—An extensive investigation and report upon a power development for Keithley and Dansalan was made and

submitted to the director of public works during the year. This project includes a water supply for Dansalan. In connection with this project the possibility of lowering the lake level was investigated with the idea of reclaiming in this manner a large track of rice land bordering the lake. It is hoped that funds will be available this year for the installation at least of the hydroelectric plant.

"The present engineer is a very capable man and is carrying out the public works program in a most competent manner.

"SULU PROVINCE.

"Roads and trails.—The following amount of roads and trails existed in the Province on December 31, 1918: 29.9 kilometers first-class road, 14.7 kilometers second-class road, 9.7 kilometers third-class road, 116.5 kilometers first-class trail, 65 kilometers second-class trail.

"The only increase during the year included in the above is 5 kilometers of first-class road. The surfacing on the Sulu roads proved far too light for the heavy truck traffic to which they are now subjected, and consequently the greater share of 1918 road funds was expended in resurfacing.

"Two rubblestone and concrete culverts were constructed on the Jolo-Parang road and repairs made to several of the temporary bridges. One new wooden-pile bridge was also constructed on this road, one on the Seit Lake Road, and another completed except for decking.

"Telephone lines.—There are 85 kilometers of telephone lines in the Province, of which 5 kilometers were constructed during the year. This is exclusive of Jolo city lines. The telephone central has been moved to the municipal building and the service considerably improved.

"Buildings.—The following buildings have been completed during the year: One domestic science building, a frame structure with tile roof; one No. 1 wooden school building with tile roof; one No. 2 wooden school building with tile roof; four teachers' wooden cottages with tile roofs; two temporary wooden frame markets with nipa roofs.

"Sulu Province has extensively taken up tile roofing for school buildings. The tiles are made at Zamboanga and shipped to Sulu Province. The tile makes a very pretty roof, somewhat cheaper than the present cost of galvanized-iron roofing, but as yet has not proved absolutely water-tight under driving rains.

"Considerable repair work has been done to the customhouse building and also to the military buildings which were turned over to the civil government at the beginning of the year. Quite an extensive school building program is contemplated for the present year.

"Port works.—A number of new wooden piles have been driven under the Jolo wharf and repairs made to caps, stringers, and decking. New fender piles have also been driven along the front of wharf. A small wooden launch wharf was constructed at the eastern side of causeway. Repairs have also been made to the Siasi wharf.

"General remarks.—Owing to the fact that expenditures were made by the treasurer's office on public works projects without being taken up in the district engineer's books and that equipment was purchased without appropriations being made to cover same, overdrafts to the amount of approximately ₱27,000 have been incurred on public works projects. These overdrafts will be immediately covered from 1919 funds. Work was started during the first of the year on too large a scale for the funds available. It is planned to ascertain how much funds are available this year and to plan the work more in accordance with the funds available. The public works supervision is being very ably supervised by the present district engineer.

"ZAMBOANGA PROVINCE.

"Roads and trails.—The following increases in the road and trail system of the Province has occurred during the year: Eight kilometers first-class road, 4 kilometers second-class road, 10.9 kilometers third-class road.

"The Province had on December 31 the following amount of roads and trails: Fifty-three and eight-tenths kilometers first-class road, 14.6 kilometers second-class road, 40.7 kilometers third-class road, 120.2 kilometers first-class trail, 285 kilometers (approximately) second-class trail.

"In addition to the regular road maintenance a considerable amount of resurfacing has been completed on both the Zamboanga East Coast and Zambo-

anga West Coast roads. A wooden truss bridge with pile bent approaches, totaling 120 feet in length, was constructed at Isabela. A 50-foot wooden pile bridge was completed at Talungatung. A 26-foot steel-girder bridge with wooden deck and concrete abutments was constructed over the Calibato River on the Manikaan-Bolong road. One concrete abutment was completed and practically all materials purchased for an 80-foot truss bridge with pile bent approach for the Manikaan Bridge.

"Telephone lines.—There is a total of 213 kilometers of telephone lines under operation in the Province exclusive of the city lines. Of this 28 kilometers are duplicate lines. There was no increase during the year.

"Buildings.—The largest building project is the Zamboanga Normal School, which has progressed steadily but somewhat slowly during the year. It has been impossible to obtain enough carpenters to push this job. Nevertheless it is hoped to complete the building in about one year. The building will be one of the finest in the Philippines. It is to be a two-story concrete structure with tile roof and is estimated to cost approximately ₱270,000.

"A very attractive concrete pavilion for the Zamboanga General Hospital was completed and opened in September. A wooden contagious pavilion with galvanized-iron roof was completed at the rear of the concrete building.

"A 3—A wooden school building with tile roof was completed at Talungatung.

"Materials have been ordered for a trade-school building, a domestic-science school building, and a block of 10 double 4 by 6 meter-tiendas, all of which are to be of concrete construction with Zamboanga tile roofs.

"Port works.—The 12 by 63 meter Zamboanga concrete pile wharf extension was completed in March and the asphalt wearing surface placed in May. During September and October bureau of public works ladder dredge No. 2 dredged Rio Hondo to a depth of 14 feet and dredged behind the Zamboanga concrete wharf to a depth of 20 feet. A small wooden wharf was also constructed at Latuan, Basilan Island."

AGRICULTURE.

The agricultural development of Mindanao-Sulu during the year 1918 has been characterized by the great activity displayed in the cultivation of coconuts, which has greatly occupied the attention of farmers, especially the small landholders, including Mohammedans and pagans. In almost all parts, even in remote regions, like the small islands of Tawi-Tawi, may be found new and extensive coconut plantations.

In Davao the big plantations have also been gradually substituting their abaca lands for coconut. This activity has been due to the fluctuating price of abaca during the year 1918 and to the tremendous growth of the oil industries, which gave great importance to the cultivation of coconut.

The development of agriculture in Mindanao-Sulu has been considered as one of the principal activities of the Government and has systematically received due attention during the year. In Zamboanga there is an agricultural advisor who, together with the agricultural assistants of the Provinces, form an expert body of our agricultural campaign. The schools have also done their important part in undertaking work which is not only beneficial for the present but serves as a firm basis for an agricultural and prosperous country. Our Provinces, municipalities, and municipal districts have displayed unusual interest in this matter by the adoption of rules and necessary measures tending to develop local agriculture. In this manner, with the considerable increase in the number of coconut plantations, large areas have also been planted to food crops, while a considerable number of domestic animals have been provided for.

The same activity in the propaganda work in Luzon and the Visayas has been continued, as also the bringing down of home seekers and laborers, with the understanding that they will later on become homestead owners. About the middle of the year there came to Mindanao-Sulu a party of merchants, who after a few weeks formed a corporation and filed application for the agricultural exploitation of several thousand hectares of land along the southern coast of Cotabato.

Cattle raising has also received proper attention during the year by the organization of provincial ranches, introduction of pure Indian cattle breeds, adoption of measures tending to prevent the slaughter of cows, and by inculcating the necessary instructions for the best method of animal husbandry.

In this way due importance has been given to this industry, and the people, appreciating its value, are becoming skillful in its management. At the beginning of the year 1918 there appeared mouth-and-foot disease in the ranch of the Crescent Star Cattle Co., in Diclom, Bukidnon, and rinderpest in the Provinces of Zamboanga, Cotabato, and Davao. "Zurra" has also been registered in Cotabato and has taken a heavy toll among horses. Although rinderpest has caused considerable loss, however, there has been saved a selected number of cattle which is now being utilized as the basis of the future development of this industry. The Crescent Star Cattle Co., of Bukidnon, has at present 1,200 cows, with an average of five births daily. We have at Jolo 61 head of pure Indian cattle breed; in Zamboanga, 36 head of the same breed; in Cotabato, 36; and Lanao, 40. This number will be used as the basis of the improved breeds of cattle that are desired to be obtained.

The Japanese are insistently, though silently, penetrating into Davao. Every arrival of a vessel from Australia, Japan, or Manila brings hundreds of Japanese into that Province. It was estimated that about the middle part of 1918 some 9,500 Japanese settled in Davao, and at the close of the same year there were found at least 12,000 Japanese in that region. We have found it difficult to compile statistics of the Japanese settling in Davao, for the reason that those coming on insular vessels were not required to register at the customhouse in Zamboanga, but the estimate given above is a very liberal one. It is believed that the Japanese immigration has been purposely carried on in accordance with a preorganized scheme.

To attain this end they are employing every conceivable means within their power to gain possession of all available land in Davao Gulf. I remember the instance when a schooner illicitly attempted to land at Mati several Japanese immigrants, but the act was discovered and the Japanese sailors were arrested, but not the passengers, numbering more than 20, who were able to disembark. They have also gone to the extent of marrying native women, with the principal object of taking hold of their land and receiving protection as a result thereof from the parents and relatives of their wives.

The following is the list of plantations in Davao sold to Japanese concerns since the latter part of 1917:

	Price sold.
Magnaga plantation, American.....	₱35,000
Piso coconut plantation and cattle ranch, American.....	275,000
Southern Cross plantation, American.....	105,000
Garrido and Glimenez, Spanish.....	85,000
Sawyer plantation, American.....	60,000
Prudasan plantation, American.....	120,000
Nap-napan plantation, American.....	90,000
Total.....	770,000

Plantations, 100 hectares and over each, owned by different nationalities in Davao Province:

Nationality	Number of plantations.	Land occupied.		Average size of plantations.	Improvements.		
		Hectares.	Per cent.		Hemp (hectares).	Coconut (number).	Rubber (hectares).
Japanese.....	71	56,619	58	797	2,946	29,311	.....
Americans.....	34	19,210	20	565	2,196	78,360	129.5
Filipinos.....	44	16,078	17	365	1,260	47,391	24
Others.....	15	6,157	5	410	347	58,300	.....
Total.....	164	98,064	100	597	6,749	213,362	155.5

The following statistical table contains data of principal crops produced during the year 1918. The Lanao column is not filled on account of not having received the report in time. In accordance with the same, 42,861 hectares have

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been planted to rice; 73,929 hectares to corn, and 658,206 hectares to coconut. From this, however, there are other plantations which were not yet reported and from which we have no data:

Classes and year of organization of domestic corporations of Mindanao-Sulu.

Year.	Agricultural.		Commercial.		Industrial.		Total.	
	Number.	Paid-up capital.	Number.	Paid-up capital.	Number.	Paid-up capital.	Number.	Paid-up capital.
1906.....	2	P102,800	1	P6,200	.....	.....	3	P108,800
1907.....	5	156,665	1	7,500	2	P28,500	8	190,665
1908.....	2	31,000	1	30,000	3	79,900	6	140,900
1909.....	1	4,300	.....	.....	3	67,800	4	72,100
1910.....	3	28,025	3	28,200	.....	.....	6	56,225
1911.....	4	115,000	2	59,800	.....	.....	6	174,800
1912.....	4	74,728	4	219,625	3	109,700	11	404,053
1913.....	6	219,200	3	73,575	3	218,850	12	511,625
1914.....	9	122,660	3	47,100	2	279,500	14	449,260
1915.....	8	65,100	.....	.....	.....	.....	8	65,100
1916.....	8	182,310	.....	.....	.....	.....	8	182,310
1917.....	41	722,720	5	180,500	.....	.....	46	903,220
1918.....	35	500,600	5	113,000	2	3,165	42	616,765
Total.....	128	2,324,908	28	765,500	18	785,415	174	3,875,823

Capitalization of domestic corporations of Mindanao-Sulu, by provinces.

Province.	Number of corporations.	Capital.		
		Authorized.	Subscribed.	Paid.
Agusan.....	2	P448,000	P114,178	P54,178
Bukidnon.....	1	200,000	40,000	10,000
Cotabato.....	7	390,600	237,100	147,690
Davao.....	108	5,218,400	3,634,160	2,014,035
Lanao.....	5	350,000	223,850	207,465
Sulu.....	9	470,000	198,500	180,725
Zamboanga.....	44	4,784,500	1,910,370	1,305,910
Total.....	176	11,831,500	6,362,158	3,899,913

Agricultural data, 1918.

Province.	Number of trees planted.				Number of hectares planted.			Live stock.		
	Coco-nuts.	Abaca.	Coffee.	Cacao.	Rice.	Corn.	Vegetables.	Cows.	Cara-bao.	Horses.
Agusan.....	83,000	3,300,000	5,081	3,000	371	405	150	475	350	.....
Bukidnon.....	5,000	None.	47,000	3,260	620	2,300	200	7,170	6,000	2,000
Cotabato.....	259,800	25,000	None.	500	30,000	6,000	800	3,350	25,000	200
Davao.....	100,406	25,953,000	7,018	743	11,725	8,626	68	20,955	6,794	2,383
Lanao ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sulu.....	60,000	450,000	None.	None.	2,000	500	400	6,000	2,500	1,000
Zamboanga.....	150,000	350,000	12,000	5,000	8,145	2,098	(*)	10,000	11,600	3,000
Total.....	658,206	30,078,000	71,099	12,508	52,861	19,929	1,618	47,950	52,244	8,583

¹ No report submitted.

* No data.

AGRICULTURAL COLONIES.

During the year 1918 the undersigned, in behalf of the Department governor, visited on three occasions the Cotabato agricultural colonies. About the middle part of June a great flood occurred in the territory, which entirely destroyed

the growing crops. This was later followed by a two weeks' intense drought, which killed the plants that survived from the flood. These calamities compelled the colonists to make extraordinary effort to plant rice and corn so as to regain in a way the loss they sustained from these disasters. Through an allotment of ₱5,000 in the form of aid there was built a dike 3 kilometers long, which when finished will protect a great part of Colony No. 1. Plans are now under way to extend this dike up to Talitay; also it is planned to construct another dike, which at the same time may serve as road from the central building of the colony in Pagalungan toward Cabakan.

The dikes are made only of earth, as they were constructed to remedy the situation temporarily. For this reason, it has been deemed advisable to transfer the colonists from the lowland to the highland, where the soil could be advantageously used for rice or corn planting. Therefore explorations have been made by the provincial authorities and after a close study and examination of the matter, the provincial governor finally decided to select Bual as the most suitable place for the colonists. Bual, which is considered as one of the most beautiful sections of the valley, possesses an exceptionally rich soil of alluvial deposit, situated on a smoothly level plain covering an area of approximately 20,000 hectares, at a sufficient altitude to protect it from flood. The only difficulty found in reaching that point is the lack of good transportation facilities, which could be successfully overcome if the existing small canal connecting with the Cotabato River is dredged. The canal will be 3 kilometers in length and 15 meters in width so as to permit comfortably the passage of the *Hall* and other launches.

Notwithstanding the flood, the colonists succeeded in cultivating during the year 2,262 hectares, 509 hectares of which were planted to palay and 1,173 hectares to corn, while the rest were planted to tobacco, peanut, sweet potatoes, sugar cane, yams, tangan-tangan, cacao, papaya, gabi, banana, coffee, and coconut. There having been planted 4,231 coconut trees. During the year, 2,526 cavans of palay and 6,448 cavans of corn were harvested, there having been left unharvested 445 hectares planted to corn. Corn obtained a favorable market during the year, 1,834 cavans having been sold in Cebu at ₱7 per cavan.

Apart from the inundation already mentioned, the colonists also suffered from smallpox in April and from influenza in November, causing a casualty of about 95 per cent of the colonists. These epidemics seriously affected planting and harvesting. Zurra and an unknown cattle disease also appeared in the colony and were reported immediately to Manila, but by reason of the fact that the veterinary personnel of the Department was engaged on an urgent work in another Province, these diseases have not been carefully attended to. However, Dr. Samson, the Department veterinarian, is being detailed to Cotabato to take charge of this work. The plan of Gov. Carpenter to furnish the colony with a tractor is an excellent one. One of the great difficulties encountered by the colonists is the very fertility of the soil, whereon the weeds grow and thrive abundantly. A colonist living under this condition with only a single carabao to help him in his work finds himself greatly handicapped in tilling his land.

There are at present in the Cotabato colonies 470 families, consisting of 2,738 Visayans, nearly all of whom came from Cebu, and 473 Moro Maguindanao families of 2,894 persons. These families live in colonies Nos. 1, 2, 3, 5, 7, and 9, the last of which is located in Glan and is made up of Visayans from Cebu. In spite of the many reverses which these colonies suffered, a great many of them have already settled their obligations to the Government. The completion of the Paidu-Pulangui road, covering a distance of approximately 14 miles, will afford a new incentive to the present activities and rapid development of the colonies, the majority of which are located in the interior and are lacking in communication facilities. Home industries, like poultry raising, are gradually growing in importance in Cotabato, and every inducement will be given to interest these families in their management. Unquestionably the completion of the road will afford the only solution of the difficulty encountered in the transportation of products. A canal, 2,220 meters long and 2 meters wide, has also been constructed, which will serve as an outlet for Dunguan, one of the most productive sections in the colony. The sum of ₱554 was expended in the construction of this canal and in building the headquarters of colony No. 5 in Pagalungan.

Additional information regarding these colonies may be found in the report of the secretary of agriculture and natural resources. However, before leaving this subject, I beg to make note of the following: The success obtained in amal-

gamating the different tribes of Mindanao through the establishment of these colonies is undisputable. This is its principal objective. It is almost a dream to imagine how in a place which seven years ago was nothing but wild cogon lands, where fierce Maguindanaos and murderous outlaws lay in wait to rob cattle and kill their owners, especially if they be Christians, there now live under the most cordial relationship of amity and sympathy, helping one another and considering each other as brother, a people who formerly were bitter enemies—Mohammedans and Christians. This is an accomplished undeniable fact, and shows in a very evident and conclusive manner the accomplishments resulting from the wisdom of such a plan. Not only tolerance and mutual trust exist among these people, but also ardent desires on the part of both, especially of the Moros, to bury forever the differences between them and their Christian brothers.

But this unity in thought and sentiment may be more clearly seen in the public schools of the colony, where it is extremely difficult to distinguish the one from the other. Dressed in the same attire, seated on the same bench in drinking the fountain of knowledge, and playing hand in hand, the Mohammedan and Christian children feel completely united in sentiments and ideals as they daily sing "Philippines, my Philippines," and are coming to realize that they are sons of but one fatherland. After 15 years have elapsed from now, when the children now attending the public schools become of age as to entitle them to the right of participation in the determination of public affairs, with a clear understanding of each other's duty as brothers, ready at all times to help mutually, then, and only then, will the work of amalgamation which was being made possible by the establishment of agricultural colonies yield its desired fruits and be a blessing to our country for the great good which it has accomplished.

I have passed several nights in the colonies and I have met Moros who, feeling the warmth of brotherhood existing between the different elements and sharing the pleasures of the festivities celebrated in localities which formerly were nothing but wild bushes and the abode of outlaws, expressed to me with a thrill of joy that all they have seen appealed to them as something miraculous. This is a term applicable to the marvelous transformation achieved in Cotabato, which is of the utmost importance in its social, political, and economic development of our country.

The secondary aim sought by the establishment of these agricultural colonies is to effect a uniform distribution of population by bringing down inhabitants from the densely populated districts to sparsely inhabited regions and to bring about a maximum percentage of production for themselves and the country. The colonies are no longer in need of assistance and are at present self-supporting. It is true, indeed, that calamities befell upon them, but I have a strong belief that the same will be a complete success.

PUBLIC LANDS.

One of the most important matters in the Department of Mindanao and Sulu is that which refers to the survey and adjustment of private and public lands. The present program is entirely constructive in nature and proper attention with regard to the question of public lands constitutes one of the most important factors which contributes to the solution of diverse problems confronting the Department. In this Department "cañgin" system is in vogue, by means of which a person clears a forest, utilizes it for two or three years, abandons it later, and removes to another place. This system of the cañgin maker gives him the idea that he is not only owner of the lands which are opened by him but also of those surrounding the same, the area of which being unlimited and is vulgarly known as "sulong." For this reason when a settler comes along and locates his homestead in any of the above-named places he encounters always some person who styles himself as the owner of the same. Then arises the question of placing the immigrant in the alternative of leaving the place or quarreling with the pretended owner. In this case the settler will return home with the idea of having been deceived in his failure to find the "promised land," with a black impression of Mindanao.

These facts are true and are happening with frequency, producing disastrous consequences. They encourage speculators of bad faith, foster laziness, retard greatly the material progress of the country, and serve as a barrier in the work of amalgamation by obstructing the personal contact of the different elements,

not to mention the loss of a home and of an independent life which the immigrant has dreamed of with enthusiasm, and for which he has decided to devote all his efforts and energy. Yet all these may be due to the fact that public lands have not been properly surveyed.

Another significant aspect of the question is that the survey of the public lands and the consequent adjustment of titles thereto, especially of those belonging to the small landholders, will oblige the seminomadic tribes to stay permanently on a given place, who, following the life of a happy man, however small his holdings may be, is better disposed for his own good and that of his family to help at any time in the maintenance of peace and order, thus making himself an element for the common welfare.

The public lands of Mindanao and Sulu must be surveyed if it is desired that these islands develop rapidly. The adjustment of public lands constitutes an important factor for the future economic prosperity of a country.

During 1918 there have been filed with the bureau of lands 2,569 homestead applications, which cover an area of 30,324 ares; 1,705 applications for free patent, covering an area of 7,781 ares; and 103 applications for lease of public lands, covering an area of 29,937 ares. These were the principal transactions, aside from the numerous activities with which the bureau of lands in Zamboanga has been engaged. Other data in this connection may be found in the report of the director of the bureau of lands.

FOREST.

The bureau of forestry in the Department has been exerting every effort to conserve and protect our forests from the destructive practice of making "cañigins" and to make them produce the greatest yield of forest products. Due to this effort, a notable decrease in the proceedings instituted against "cañigin" makers has been observed, and this indicates that the measure taken is producing good results.

There are at present in territories within the Department of Mindanao and Sulu 11 sawmills, which produced 64,535 cubic meters of lumber during 1918. This figure does not include the output of the 157 small concessions in actual operation. In Tawi-Tawi and other southern islands of Sulu the manufacture of ties for the railroads of Manila is rapidly developing. At the present writing no data are available to show the total number of ties produced, but during the year several vessels, among them the *Romulus* and the *Kaponka*, of about 2,000 tons' displacement, called at these ports for these ties.

Of the minor forest products heretofore known and which are being exploited under a commercial basis, the following are the principal ones: Almaciga, beeswax, rattan, biao, dilliman, dye bark, charcoal, dyewood, firewood, gogo bark, gutta-percha, tan bark, and tañgal bark.

In Jolo approximately 2,533 hectares of land are preserved as "Teak Reservation." Plans are also under way for establishment of similar reservations in Basilan, Lanao, and Davao. There is being established in Pasonanca a "Teak and nursery plantation" covering approximately 5 acres. Teak wood may be found in the following places: Butuan, Malabang, Buluan, Lamitan, Bohelebung, Santa Maria, Masinloc, and Jolo. Next to Jolo the Buluan teak land, which contains approximately 65 hectares, ranks second in extent and importance.

Besides the teak, molave, narra, tindalo, and other first-group timber, we have in Agusan and Surigao what is known as the Mancono (Palo-hierro), the hardest kind of wood known. I have seen in Butuan and Cabadbaran posts made of this timber possessing a durability which could withstand an indefinite usage. It might be worth while to know the possibilities which this wood has in the world market, for it will serve as an abundant source of income to the country.

The lumbering industry of Mindanao would have been much more lucrative had there been available adequate transportation facilities sufficiently to meet the demands in this country, China, and other foreign ports. This deficiency in transportation has at times caused during the year an accumulation of products which compelled the higher authorities of Manila to make arrangements for the *Liscum* and *General Weeks* to call at Mindanao to relieve the situation. The schooner *Foo-Kien* towed by the coast guard *Gilbert* has also come for the same object. The firm Atkins, Kroll & Co. has also lent services by making available their three schooners, as was also in the case of the steamship *Imam* of the Basilan Lumber Co., which carried lumber for Cebu.

TRADING SYSTEMS.

In accordance with Act No. 2660, trading systems are being operated in all the Provinces of the Department. The trading stores are located in districts centrally situated capable of exerting influence within a large, well-populated territory with a view of promoting commerce and trading intercourse and the development of agricultural and industrial possibilities of isolated regions devoid of trading facilities. Through these trading stores the people are accorded facilities to dispose of their produce and to buy merchandise at reasonable prices, thus preventing their exploitation by unscrupulous traders.

As the circulation of money in most of the backward settlements is nil, it has been found difficult to impose and collect taxes therein, and only through the medium of trading stores this obstacle for the enforcement of taxes has been overcome.

The activities of trading systems have been considerably enlarged during the year by the purchase and sale of cattle for resale to the public as follows:

1. Those fit for breeding purposes are sold at cost, plus transportation and other expenses, to people living in regions provided with abundant pastures but where no cattle are raised on condition that purchasers shall bind themselves not to sell or otherwise dispose of the animals within two years from the date of purchase, limiting from one bull to five cows that which can be purchased by each head of family.

2. Those fit for agricultural purposes are sold preferably to small farmers at a price not exceeding 10 per cent profit.

3. Those unfit for breeding purposes are sold for slaughter.

Under the foregoing conditions it can be readily seen that the extension and development of the trading system throughout the Department constitutes a no less important factor in the encouragement of cattle breeding by private individuals with a view to supplying the increasing demand for cattle which has been more or less accentuated, especially in those remote and isolated regions of Mindanao.

The lack of work animals and the difficulties encountered to secure them by purchase at a reasonable price has greatly hindered the work on the fields and retarded the development of agriculture in Mindanao-Sulu. However, it is believed that the sale by the trading system of animals fitted for agricultural purposes at cost and with practically a small profit to the Government will undoubtedly afford a better opportunity for our small farmers to provide themselves with the necessary work animals they need for their farms.

As the trading system reports are not as yet all rendered, statistical figures can not be given of the transactions of trading systems during the year, but these data would appear in the report of the insular auditor.

MINERAL PRODUCTS.

The work preparatory to the exploitation in great scale of the coal mine at Sibuguey, Dumanquilas, Zamboanga by the National Coal Co. is progressing rapidly. During the year 1918 the work has been properly organized. Houses and adequate lodgings for the personnel have been constructed, also there have been provided launches and other means of maritime and river transportation. There have also been taken into that place railroad and necessary apparatus for the exploitation of the mine. The extraction of carbon has not as yet commenced, but preparations have almost been terminated, and the exploitation of the mine will commence very soon. The coal in said places is of high-grade quality. It is equal to, if not better than, that taken from China and Japan, which is the one more generally used at present in the islands. The success of this work should be of positive good for our country as it would respond to one of our urgent needs and at the same time render immense benefits to the National Treasury.

The oil mine in the region of Pidatan is not as yet exploited, nor the gold and iron mines at Agusan and different points of Mindanao.

MARINE PRODUCTS.

In Mindanao and Sulu waters there are operating in the neighborhood of 57 pearl boats devoted, as its name would indicate, to fishing pearls, sponges, shells, coral, etc. It is quite difficult to make an exact estimate of the value of pearls fished during the year 1918, because in the majority of cases the

sales have been made by small ambulant fishers and naturally they are difficult to register; but it is estimated that this industry has rendered a product valued at ₱217,024.80.

The sponge industry remains in its primitive state by reason of the lack of capital to develop it appropriately, but it is imaginable that in Mindanao and Sulu Seas there abound many places which are or may be converted into splendid producers of sponge.

The fishing industry is developed under the same routine method employed as heretofore. The majority of fishers are Samals, who utilize fishhooks, spears, and other fishing handiworks, and on certain occasions net for small kinds of fishes. Corral is also of common use for fishing throughout Mindanao, although the Moros of Jolo do not consider it as a principal fishing instrument.

There are available monthly in many islands of Zamboanga and Sulu, especially in Sitangkai, hundreds of sacks of dried and salted fish, which are sent to Davao and to Visayan Provinces, where they find ready market. If there exists, however, an organized capital to undertake this industry, especially in the salting of fish, improving the methods at present employed, undoubtedly this industry may be developed in great scale, obtaining, by the improvement of quality, better price for the product. The fishing industry has great importance as forming a part of the food problem, and at the same time promises good return to those engaging in it. To propagate its importance by awakening the interests of capitalists and conducting campaign for the improvement of the methods at present used should now be one of the principal works of the Government in this matter.

COMMERCE AND SHIPPING.

Commerce in Mindanao-Sulu has received stable backing with the organization of the Zamboanga Oil Co., which has commenced operations during the middle part of the year 1918. This corporation is capitalized with ₱1,000,000, and, although its principal object is the manufacture of oil, it will nevertheless engage in general commerce. This company represents several powerful business firms of Manila, and its central office is in Zamboanga.

Notwithstanding the European war, commerce has continued to flourish, there having been registered various activities in other pursuits; and we may thus call the year 1918 as a "good business year."

The increase, however, in agricultural and industrial production, as well as in the output of the lumbering industry, on the one hand, and the European war, on the other, gave rise to transportation difficulties, there having been registered in some places and at certain periods of the year cargo accumulation which required the use of radical measures on the part of Government authorities.

The Department has continued the operation of the coast guards *Tablas* and *Mindanao* for general freight. For the transportation of laborers and general cargo between Cebu, Zamboanga, and Davao, the steamship *Marinduque*, of the bureau of labor; the *H. I. R.* and the schooner *Mustavit*, of Mr. Vicente Lozada, have been rendering services. The steamship *Imam*, of the Basilian Lumber Co., as has been agreed upon in its sale by the Government, has also been engaged in passenger and freight transportation between Zamboanga and Cebu and other points of Mindanao. The firm of Fernandez Hermanos, of Manila, has kept three vessels—the *Islas Filipinas*, the *Neil Macleod*, and the *Fernandez Hermanos*—on the Manila-Davao run and intermediary ports, and the *Romulus* from Manila to Jolo, via Zamboanga, these vessels making two trips monthly. The firm of Atkins, Kroll & Co. have also been operating their sailing boats, provided with auxiliary motors, in the carrying of merchandise to different ports of Mindanao-Sulu, and this has proven of great help to small dealers and producers.

The steamship *Dalupaon*, of the Pacific Commercial Co., makes its trips to the northern part of Mindanao, and the *Misamis*, of the Visayan Refining Co., and three or four schooners provided with auxiliary motors are engaged in traffic along the coastal towns where vessels of major tonnage do not call.

Toward the month of March the firm Francisco Barrios & Co. sold their vessel *Antipolo*, which was running between Sitangkai, Cagayan de Sulu, and intermediary ports from Zamboanga, but this run has been taken later on by the steam launch *Research*, which was administered by the Province of Sulu and devoted to general traffic between the Island of Jolo, Zamboanga, and Cotabato. During irregular periods of 1918 voyages to Mindanao-Sulu

were made by the steamship *Pelayo*, of the Visayan Refining Co.; the steamship *Vigan*, of the Compafia Mercantil; the *Quantico*, *Liscum*, and *General Weeks*, which, through the efforts of Gov. Carpenter, have relieved the accumulation of abaca in Davao and the congestion of lumber in Lebak and Port Banga. I believe that on various occasions the schooner *Fookien*, of considerable tonnage, towed by the coast guard *Gilbert*, has also called to take a cargo of lumber. The large vessels of the N. Y. Kaisha, plying between Japan and Australia, have also called at Zamboanga once a month with general cargo, and the English steamships *Selangor*, *Po Ahn*, and *Krian*, of the Singapore and North Borneo Line, carrying general cargo, visit Zamboanga and Jolo every 17 days. On two occasions, I believe, schooners of considerable tonnage, with an auxiliary motor, have carried hundreds of tons of copra from Zamboanga to San Francisco, bringing general cargo on return trips.

Notwithstanding the existence of these vessels there has been noted, as mentioned above, an accumulation of products in some localities, and commerce would have been greatly increased if the shippers had the complete assurance that their merchandise could find immediate adequate shipping facilities.

The trading system as a business enterprise has also proved a success, aside from the fact that it has been one of the factors which has stimulated and given impulse to interior commerce by utilizing forest products having commercial value, and has thus contributed in the extension of Government control and in making possible the collection in greater proportion of the cedula and land taxes.

Exports and imports.

Province.	Total value of exports.	Total value of imports.
Agusan.....	P2,029,295.93	P1,715,000.00
Bukidnon.....	501,700.00	78,750.00
Cotabato.....	448,800.39	419,041.91
Davao.....	11,080,000.00	5,225,358.00
Lanao.....	92,756.92	338,691.59
Sulu.....	3,215,203.03	2,914,942.48
Zamboanga.....	3,285,057.36	1,201,548.00
Total.....	20,652,813.63	11,893,331.98

MANUFACTURE.

The principal industry in Mindanao is lumbering, and, as I stated under the head "Forestry," there are at present in Mindanao 11 sawmills in full operation, their output during the year being 64,535 cubic meters of lumber. Apart from the work of the big lumber factories, there also exist small concessions engaged in the cutting and export of lumber from near-by places for local use only. In the island of Tawi-Tawi the manufacture of ties for use of the railroads in Manila is acquiring importance. On several occasions the steamship *Romulus*, and about the month of December the *Kaponka*, a vessel of considerable tonnage, called at this port for these ties.

The Zamboanga Oil Co. is now completing the construction of their buildings at Caldera Bay, where they are at present installing their plant for the manufacture of oil. It is expected that this factory will soon commence operation, and it is believed capable of milling about 22,000 piculs of copra monthly.

The manufacture of tiles for roofing, as an advantageous substitute to that of iron, is also acquiring no small importance in Zamboanga. Actually in the barrio of Santa Maria there is being built a spacious warehouse by a corporation which will engage on a big scale in the manufacture of tiles for roofing and other purposes.

There exist also in the Department of Mindanao and Sulu small horseshoe shops and carpentry and other shops for the manufacture of furniture, handiwork, hats, mats, and other articles of local and ordinary uses, but their production is on a small scale and does not yet deserve special mention in this report.

The industrial work in the public schools, such as the manufacture of furniture and other household utensils, is assuming rapid strides. The goods that are being turned out are of such quality that they always find demand and ready market.

BANKS AND CREDITS.

There has been no change in this line of activity with the exception of the establishment of a branch of the national bank at Davao, which is now conducting advantageous operations for the bank and for the planters in the Provinces. It is expected that the present agency at Zamboanga will be changed into a branch, and I understand that this matter is now receiving consideration on the part of the directors of the bank. In the capitals of the seven Provinces of the Department the national bank has agencies under the supervision of the respective provincial treasurers. There exist in Zamboanga a branch of the Bank of the Philippine Islands as well as an agency of El Hogar Filipino, and these are making loan operations which are helping in the material development of the Province. The Zamboanga Mutual Building and Loan Association also operates in Zamboanga, giving loans with reasonable terms.

IMMIGRATION.

As stated in the increase of population, I reckon that only some 12,000 Filipino immigrants have come down to Mindanao during the year 1918. From this number, 8,771 have been sent down under the intervention of the bureau of labor, and almost all laborers were allotted to Davao, Zamboanga, and Agusan. The rest is composed of laborers contracted for the National Coal Co., other private enterprises, and small property owners who came down from the Visayas Islands to northern Mindanao in search of land and a better future.

It is a fact that immigration is one of the principal factors which solves the so-called Filipinization of the Mohammedans and pagans, who form the greatest number in Mindanao and Sulu and who also are an element of material prosperity. Even though this matter was carried on completely under the control of the bureau of labor, the Department of Mindanao and Sulu during the year 1918 has put forth all necessary efforts to assist the said bureau in attaining its desired purpose.

In the middle part of the year several families from Batanes were brought down to Bukidnon, and 23 heads of families from Iloilo, a total of 125 persons, went to Basilan. Several families also went during the year from Ilocos to Cotabato. With the exception of those from Iloilo, the homeseekers have not obtained any help from the Government except their transportation. The immigration of middle-class families with an initial capital of ₱500, at the least, each, is giving good results. They are ordinary working people, with faith in their future in Mindanao, and are not easily discouraged over the hardships which are always encountered in the first years. They form a firm foundation for stable, permanent settlements of future independent landowners. I have observed that it is difficult for a simple laborer who is dependent solely upon his daily wages to accumulate sufficient capital for his future use even in spite of his desire to save. They see that after having worked for one or two years there remain scarcely no savings. It is true that there are some, very few, who have succeeded in opening up and caring for their homesteads, but these are exceptions. The majority remain the same without any hope of better prospects.

The first difficulty to be met with by middle-class families is the transportation. Those who come down from Ilocos, Iloilo, Bohol, or Antique do not want to spend anything from their meager but hard-earned accumulations of capital to pay for transportation between their Province and the ports of call at Cebu and Manila, where the Government boats usually stop. This fact constitutes one of the main obstacles. In case it is not possible to call at convenient ports regularly, it might be well for the bureau of labor agency for recruiting laborers in the Provinces to make propaganda in order to invite middle-class families and arrange their transportation in Government boats at any time when a sufficient number of them justifies a coast guard to stop in a port.

In opening up any new country the success depends upon the kind of people who go there to develop it. In Mindanao and Sulu the chief problem is to get industrious people from rural districts to settle upon the immense unoccupied areas of fertile land. It would be worse than useless to have immigrants come here from urban communities, even though they paid their own transportation, but it would be equally a sane, practical, paying business proposition for the Government to spend money to advertise for successful small farmers to occupy the lands being divided into homesteads and to pay their transportation from

their present home to their future home. The small cost in this item of transportation would be returned in a few years in land taxes paid, proportion of internal revenue, and customs duties on products, to say nothing of the relief of congested districts where the population has nearly reached the point of saturation. The immediate increase in the wealth of the country must also be considered. It furnishes a direct means for increasing the population by freedom from crowding. It is well known that in a new country the births are more and the deaths less than in congested areas, due to the greater opportunity offered in the productivity of the soil in proportion to the struggle. One must not lose sight of the tactical advantage in establishing families from the northern Provinces in these places if it is hoped to secure a homogeneous people throughout the Philippine Islands.

During the year a plan has been partially worked out by an harmonious arrangement between the Department and the bureau of lands whereby intelligent and specific location may be made of homeseekers in desirable, fertile areas easily accessible to means of communication. Once a large area is ascertained to meet all the requirements, a certain portion is set aside for subdivision into 16-hectare lots for homesteading or individual purchase. Other portions of this land are set aside in convenient units in juxtaposition to the homestead lots for plantation sites. Effort is made in advance to secure men with sufficient capital to apply for these portions of land and begin development thereon. Once his capital and operations are assured, a descriptive pamphlet with photographic reproductions is prepared and translated into Ilocano, Tagalog, and Visayan dialects, with a view to make potential homeseekers acquainted with the country by sending those pamphlets into congested districts. At the same time the bureau of lands orders the subdivision of the lands into homesteads ready for the homeseekers who may arrive. The surveyors on the ground show the arrivals the corners of the land, help them to make selection thereof, and assist in making out the proper applications to protect them in their rights. By this arrangement employment is offered the homeseekers on the adjacent plantation to the extent he may desire. The plantations furnish the capital, in the form of wages, and give the homeseeker the opportunity while working thereon to observe modern methods of farming. The plantations are assured of a reasonable supply of labor in the vicinity to develop the enterprise. Both are mutually helpful. It has the great advantage in making it possible for a poor man with only ₱100 accumulated savings to build himself a home. The potential number of homeseekers is thereby largely increased. It concentrates effort upon one place and very quickly establishes social communities, without which no successful results can be achieved. It is firmly believed that this method is the correct one, and much is hoped from its growth. It will solve the political problem by extending the Christian settlements; it will relieve the congestion of people in the northern Provinces; it will increase the population, not only here but of the islands, more rapidly; it will give a tremendous impetus to the economical development; and it will at the same time increase the material wealth of the islands and the well-being of its inhabitants. No cost is attached to it but the transportation, and experience in the United States in settling the West showed the wisdom of providing nominal rates or free transportation to enterprising individuals, and we incur no greater risk here.

MISSIONS AND OTHER PHILANTHROPIES.

No notable changes may be mentioned under this heading. The bishopric of the Roman Catholic Church, of Zamboanga, has continued the operation of the Pillar Hospital; and the Episcopal Church Mission, the Zamboanga Hospital. These two institutions are carrying on in Zamboanga charitable work of vital importance.

Besides the above, the Episcopal Church Mission conducts the Moro Settlement House, which has come to be an educational center for Mohammedan girls and the Sulu Press, a monthly magazine written in Arabic, which contains instructive reading matters for the Mohammedans. Under the auspices of this same mission there is being maintained at Camp Indanan, Jolo, a farm school, opened in 1916, which is doing the Moros great good along educational lines.

There exists also in Zamboanga the Christian and Missionary Alliance, under the direction of Rev. David O. Lund, which, besides the religious services, conducts schools in Zamboanga, Margosatubig, and Lamitan, the last

one having been handed over to the Government. In Zamboanga there have been enrolled 81 girl students, 64 of whom were boarding pupils and 17 day pupils. Of these boarding students 23 receive gratuitous training and the 41 are pay students. This school is located in Tetuan and the premises are being continually enlarged, conditioned upon the requirement of its constant development.

The Congregational Mission in Davao is also undertaking notable charitable activities. It has a hospital and is conducting schools. It has branches, I believe, in Cagayan de Misamis and Surigao, where they engage missionaries in their religious work.

The Jesuits are also maintaining schools in almost every town where their mission is located, and the congregation of the Sisters of Charity of the Society of Jesus has also established colleges in Zamboanga, Davao, Cagayan, Agusan, Surigao, and other points of Mindanao.

There has been observed during the year mutual tolerance among the different religious institutions, and not an incident has ever been recorded that would stain their harmonious and amicable relations.

There also exists in Zamboanga what is known as "Centro de Puericultura," a society engaged in philanthropic work, composed almost exclusively of women, and which has for its object the protection and proper care of children. The local branch of the Red Cross Chapter has been very active in its work. During the year 1918 through its efforts was largely due the success of the recent campaign for the collection of contributions for the war.

POLITICAL CONDITIONS.

No change of any importance has been noted under this heading that deserves mention in this report. There has been no legislation enacted that would cause even a slight change in the organization of 1917. There has been noted, however, a certain tendency on the part of the leaders of some localities to strive for the highest political privileges, as in the election of municipal presidents, but such a movement has been obstructed by reason of the inability as yet of the majority of the inhabitants to take part in these elections. During the last months of 1918, the barrios of Manicahan, Mercedes, and Bolong have solicited separation from Zamboanga so as to constitute an independent municipality. This desire, however, has not been attained for financial reasons. In the northern part of Zamboanga there have also been noted movements in the towns of Dapitan, Dipolog, and Lubungan which tended toward the separation of that section from Zamboanga and its inclusion to Misamis, which movement has been supported by Senators Capistrano and Clarin, who, through a bill presented before the senate, requested this separation. The matter is, I believe, before the consideration of the legislature. My sincere opinion, however, is that these places will suffer greatly by separating themselves from Zamboanga, as in so doing they will no longer enjoy the financial assistance and other benefits which are given them.

PERSONNEL.

At the close of the year 1918, the personnel of the Department of Mindanao and Sulu is as follows:

PERSONNEL OF THE DEPARTMENT OF MINDANAO AND SULU.

Department Officials.

Department governor.....	F. W Carpenter.
Department secretary.....	Teopisto Guingona.
Assistant secretary and acting department treasurer.....	Juan Posadas, jr.
Delegate.....	Doroteo Karagdag.
Department attorney, acting.....	Delfin Jaranilla.

Provincial Officials.

AGUSAN.

Provincial governor.....	Rafael Acuña.
Secretary-treasurer, acting.....	Lorenzo Pallileo.
Third member, provincial board.....	Juan Corvera.

BUKIDNON

Provincial governor-----Manuel Fortich.
 Secretary-treasurer-----Jose Agudo.
 Third member, provincial board-----Faustino Abello.

COTABATO.

Provincial governor-----C. B. Carter.
 Secretary-treasurer-----Jose M. Unson.
 Third member, provincial board-----Datu Ampatuan.

DAVAO.

Provincial governor-----Francisco Sales.
 Secretary-treasurer, acting-----Alfredo Zamora.
 Third member, provincial board-----Antonio Pichon.

LANAO.

Provincial governor-----T. W. Coverston.
 Secretary-treasurer-----Elias M. Ataviado.
 Third member, provincial board-----Amal Manabilang

SULU.

Provincial governor-----Paul D. Rogers.
 Secretary-treasurer-----Francis L. Link.
 Third member, provincial board-----Jullus Schuck.

ZAMBOANGA.

Provincial governor-----Agustin L. Alvarez.
 Secretary treasurer-----Ild. Coscolluela.
 Third member, provincial board-----Awkasa Sampang.

With the exception of some officials, for whom on opportune occasions the corresponding report has already been sent, the entire personnel of this Department have continued during the year rendering in their respective positions excellent work, demonstrating mature experience, ability, and devotion to duty, and are subordinating their personal interests to those of their official duties.

The selection of personnel especially for positions of responsibility is fundamental, because upon it depends those conditions which determine the advancement or retrogression of a Province in its varied spheres of existence. But, in this connection, permit me to quote hereunder what Gov. Carpenter has stated in his annual reports for 1916 and 1917, which is a clear portrayal of the real significance of the question. I, who have had the opportunity to be away in isolated regions, and saw with my own eyes the dangers, and having placed myself in a position as to allow me to judge of the situation, feel myself justified to mention the facts disclosed in the following paragraphs, which are of current application:

"It is with increasing and very great difficulty that competent men are secured for appointment in the public service here. The work in all branches of Government in Mindanao-Sulu is of a constructive rather than routine character; there are involved in the service not merely constant personal sacrifice of the conveniences and social life of the Provinces of Luzon and the Visayas, but the positive hardships of travel and life in the jungles of swamps and mountains, and even the provincial capitals are remote, and in but infrequent mail communication with the rest of the world. The natural hesitation or unwillingness of competent men to give up assured employment and prospects in their home communities for the venture of service in Mindanao-Sulu is accentuated by the popular fear of encountering material hostility and probably violence among Mohammedans and pagans as it naturally is not possible entirely to dissipate the established popular convictions and traditions of recent years and past generations in Luzon and the Visayas as to the attitude of the people and conditions in Mindanao-Sulu. Furthermore, the lack of provision for Government officers and employees who become permanently invalided by reason of disease or injury contracted in the public service logically deters many of the best type of men in the public service or private occupations in Luzon and the Visayas from entering public service here, and this

is augmented by the fact that the salaries which may be paid here do not enable a man with wife and even not more than two or three children dependent upon him to provide against the contingencies of death or invalidism by salary savings. A certain type of inexperienced or otherwise incompetent individuals, of course, may easily be secured, even at materially reduced salaries. But with such personnel it will be impossible to accomplish the economic and political purposes of Government here, and the contribution which this by far the richest one-third of the archipelago may and should make to the national wealth and homogeneity will indefinitely be delayed and, indeed, endangered.

"It is not only with reference to the higher administrative positions but equally true regarding subordinate positions in all branches of Government service within non-Christian territory that increasing difficulties are encountered in securing and retaining competent men. Not only is the service unattractive as compared with other branches of the Government by reason of station at remote points, the hardships of field work, the unavoidable requirements of longer hours and greater intensity of application to official work, in many instances the nervous strain of recurring delicate public-order situations, and other distinctive circumstances peculiar to this service as compared with service in the city of Manila and in the regularly organized Provinces, but also the great phenomenal developments in agriculture and commerce offer in private employment or individual private enterprise materially greater compensations. Government is obviously greater in the extent of its organization and diversity of demands upon the abilities of its personnel than is any private corporation or individual agricultural, commercial, or industrial enterprise. It is apparent that if the Government is to be administered and served with efficiency comparable with that of good private business, which the taxpayer as a stockholder in the public corporation, which is the Government, has an undeniable right to and sooner or later will demand, the best abilities and most efficient, honest services available should be secured and retained to the Government. This is true for the same fundamental reasons which cause well-managed private corporations to seek for and hold in their services the best obtainable personnel for their purposes. Unfortunately, the results of the great public corporation (the Government), unlike private corporations, may not be stated in terms of periodical cash dividends to the stockholders (taxpayers). The dividends are in the form of the public services maintained and offered to the people. It is, indeed, unfortunate that the taxpayer does not yet demand and exact the degree and quality of those services to which he is entitled, and oftentimes, through lack of understanding and appreciation of the fundamental elements essential to satisfactory and beneficial service, the public mind is misled to demand the fixing of compensations of public servants at rates lower than the market price established by private employers for similar grades of ability and capacity to serve. Specific cases which occasion the foregoing comment are the payment of a private corporation for services in a subordinate capacity in a single industrial establishment in the Philippines of a higher rate of compensation than the maximum which may be paid to the chief executive of the Government of a Province whose territorial extent is greater than was that of the Kingdom of Belgium and involving corresponding constructive and administrative ability; the offer of higher rates of compensation for resident managers of individual agricultural plantations than the maximum which may be paid any provincial governor or provincial treasurer; the offer of higher rates of compensation to chief clerks, stenographers, and bookkeepers by private agricultural, industrial, and mercantile enterprises than may be paid employees of these grades in the public service in non-Christian territory. The foregoing facts, in confirmation of which numerous specific instances may be cited, are submitted as important pertinent information which might otherwise not come to the attention of higher authority."

Although Gov. Rohrer appears to have been governor of Jolo until the end of the year, this position was, however, in reality occupied by Secretary Treasurer Rogers since July 5, 1918, at which time Gov. Rohrer left for Manila to assume the duties of major in the Philippine National Guard.

Mr. Hughes, until September 30, 1918, the date his resignation took effect, was occupying the position as assistant secretary and department treasurer. In his place, Mr. Juan Posadas, Jr., who proceeded from the treasury of Davao, has been named as a reward of his demonstrated ability and efficiency in the management of public affairs, especially along financial matters.

INSPECTIONS.

The undersigned, in the name of the Department governor, has undertaken many inspection trips during the year 1918, which almost covered the entire territorial jurisdiction of the Department of Mindanao and Sulu, including the remote islands of Sitangkai, South Ubian, Cagayan de Sulu, the Pacific coasts, and the interior dividing line between Lanao, Bukidnon, and Cotabato. All provincial capitals, important towns, and localities which have few inhabitants but require attention for the problems they offer both to public order and other aspects of administration, etc., have not been neglected. These trips have been arranged with those of other officials of the various offices of the Government, as the Department commander of the Philippine constabulary, the Department superintendent of schools, the supervising engineer, and the local representatives of the bureaus of customs, forest, health, internal revenue, and lands, and have been taken during the year throughout the Department of Mindanao and Sulu, at the same time said officials made their inspections.

Almost all of the provincial governors, in compliance with the instructions of this office, have also spent the greater portion of their time in inspection trips within their respective territories, apart from the corresponding inspections performed by their deputy governors.

Gov. Carpenter, as director of the bureau of non-Christian tribes, has spent a considerable length of time during the year in the inspection of the Mountain Province and Nueva Vizcaya, besides the other trips which he performed in Mindanao-Sulu.

During July 30, Vice Gov. Yeater has also taken a trip of inspection in Mindanao-Sulu, visiting Jolo, Zamboanga, Cotabato, Davao, Bukidnon, and Lanao. With the vice governor came the director of education, the director of forestry, and other high officials of Manila. Director of Prisons Dade also visited Zamboanga on December 12, 1918, to inspect the San Ramon penal farm and other activities of his bureau.

CHRISTIAN, MOHAMMEDAN, AND PAGAN RELATIONS.

The friendly and otherwise harmonious relations existing between Christians, Mohammedans, and pagans have continued and progressed to such an extent that from time to time there have been noted more intimacy and more confidence in their treatments among each other and more tolerance in their religions and beliefs. This intimacy has been greatly apparent, especially in Cotabato, where Mohammedans and Christians are united in ideals and sentiments and are unconsciously erasing that unedifying legend, "Moro-Moro," an invented story, in which bitter enmity between each side is exhibited. However, we can not yet say that the problem has ultimately been solved. There is yet much to be done in this regard. This social vice has existed for centuries, and the few years that have transpired have not been enough to completely erase the traces of this social prejudice.

RECOMMENDATIONS.

Before making specific recommendations I desire to quote herewith the following paragraphs appearing in the report of Gov. Carpenter for the year 1916, which give light, in clear terms, as one of the fundamental problems in the Department of Mindanao and Sulu:

"The following recommendations are premised upon the experience of past years and careful consideration of the relation of apparent urgent present needs to eventual results in the public interest so far as now possible to anticipate, and are limited to matters requiring legislative action. The creation of fundamental conditions assuring, so far as humanly possible, permanent stable government is taken as the objective of controlling importance. The present generation of Mohammedans and pagans is now disposed to peace and loath to incur liability of further punishment by the armed forces of Government. The boys of school age of to-day will within a few years be the men constituting the controlling factor for or against peace and good order under whatever may then be the constituted government. If the fathers become in the near future permanently located on their own land, with documentary evidence of ownership, which is more highly prized by the native of Mindanao-Sulu, if possible, than by the native of the northern Provinces or the American farmer, and if the children of to-day be given the school opportunities their parents desire for

them and to which they are morally entitled from the Government, the expenditure of the large sums of Federal and insular funds and the great sacrifices of lives which have been made in Mindanao-Sulu during the past 18 years will not have been in vain, *nor will they have to be made anew*. If, however, Government administration here be dependent wholly upon inadequate insular aid and the exceedingly meager present revenues of the as yet embryo provincial and municipal governments, then in less than 10 years from now, when a new generation, grown up without the civilizing influences of schools, proprietorship of land, the impress of public works, etc., and without the sad experience had by their fathers of the chastisement administered to disturbers of the public peace, and will have come into control of public opinion in this region, the maintenance of public order will again present problems requiring large expenditures of lives and public funds by the armed forces of Government. Then, whatever there has been of progress in the accumulation of wealth, the social betterment of the people, and other benefits of civilization will inevitably in great part be destroyed. Previous years may be considered a period of trial of theories and the ascertainment of what is feasible and most productive of desired results. The Governor General and legislature have wisely and liberally provided aid from the insular treasury for the past three years of this period of investigation and experimental effort, and this liberality in material aid has been the convincing argument beyond the greatest potentiality of mere words in winning the confidence and cooperation of Mohammedans and pagans. This confidence and cooperation given by those formerly suspicious and hostile elements of native population have been expressed in material form not only in formal submission to Government and obedience to law, but by the payment of taxes and other Government dues, voluntary relinquishment of equitable rights to land required for public purposes, contributions of materials and labor without compensation to the construction of public buildings, trails, etc., and especially in the unstinted expenditure of strength, time, personal influence, and resources in assisting the Government to convince recalcitrants and apprehend outlaws. The present time is the most opportune for constructive work. And for this, adequate appropriations of insular funds must be made to supplement local provincial and municipal revenues if the progress already made be not lost and the greatest eventual economy to the insular treasury be given due consideration. Public order, present and future, and consequent political and economic advance may best be assured by due extensions of primary schools, surveys, and documentation of privately occupied public lands, and the giving of impetus by encouragement and direction to immigrant agriculturists from the northern islands and Provinces. Of the total sum available for appropriation from the insular treasury for aid in support of public instruction below the university grade at least one-third should be devoted to Mindanao-Sulu, including the contiguous Provinces of Misamis and Surigao, which comprise some non-Christian or backward population. If this be done for a period not exceeding five years, and coincident therewith there be legislative and executive action duly facilitating definition of private ownership of land and agricultural development, the Provinces of Mindanao-Sulu may then, without prejudice to the general interest of the entire archipelago, be placed with the regularly organized Provinces on a per capita basis in the distribution of insular aid to primary schools, as local school revenues may by that time, through the facilities indicated for the development of revenue from the land tax, be able to bear their proportional share of expense of school maintenance on approximately equal footing with the other Provinces of the archipelago. The experience of past years permits no other conclusion than that, here as elsewhere, efficient primary-school instruction for four years is the great bulwark of public order and best foundation of the type of citizenship which is the national ideal and essential to the creation of stable democratic government.

"The following specific recommendations are respectfully submitted:

"(a) That insular financial aid in the sum of ₱1,000,000 be appropriated annually for a period of at least five years for the extension and maintenance of primary schools having as their chief objectives appropriate instruction in agriculture, industries, elementary commerce, and the duties and rights of citizenship throughout the territorial jurisdiction of the bureau of non-Christian tribes (40 per cent of the land area of the Philippine Archipelago).

"(b) That insular aid in such sum as the director of lands may report that he can economically utilize to secure the necessary technical personnel and other expense for public-land surveys to facilitate the permanent location of the people by the issuance of titles to free patents and other private acquisitions

of agricultural lands from the public domain under the provisions of the public-land laws; and in this connection that a definite program of direction and encouragement of persons to assure the orderly and otherwise advantageous exploitation of the best agricultural districts remaining in the public domain be authorized and carried out by the bureau of lands.

"(c) That the public-land laws be amended so as to compel, under penalty of forfeiture, the productive cultivation and exploitation of lands acquired by private corporations and individuals from the public domain, thus preventing the acquisition and holding of valuable agricultural locations for purely speculative purposes, without appreciable cultivation or other exploitation in the interest of the national wealth.

"(d) That existing law be amended to provide that neither free patent nor homestead titles may be mortgaged or alienated in any degree of the right of proprietorship without the prior favorable recommendation of the provincial governor and the approval of the director of lands in any case in which the owner in interest is unable himself to read intelligently a satutory form of the mortgage or sale document in either English, Spanish, or the local dialect, under penalty of forfeiture of the property to the State and imprisonment of the purchaser, of the notarial officer and witnesses before whom the mortgage or sale document, if any, of whatever kind, was accomplished. This is essential to prevent fraud being perpetrated on illiterate persons and the privation of the non-Christian and other backward peoples of their land, the gradual creation of unduly large areas of individual ownership, and the forcing back to the mountains or into the large centers of population of large numbers of the less intelligent elements of the people, with the consequent grave menace of agrarian troubles. This is now in effect the law in the territory formerly the Moro Province, and is the only apparent method of preventing the simple-minded illiterate, especially the Mohammedan and pagan, from being defrauded of the most valuable fruit of his labor and forced to return to the mountains or to become a vagabond in the lowlands.

"(e) That there be adopted a definite, comprehensive plan for the distribution of population by the transfer of the surplus from densely populated districts to advantageous agricultural locations on public lands under appropriate direction, with coordinate activity by the bureau of lands, agriculture, and labor; that the sum of at least ₱250,000 per annum for a period of five years be appropriated from the insular treasury to meet the expense of propaganda, free transportation of emigrants and their families, and such further assistance, if any, as circumstances in special classes of cases may warrant in the public interest.

"(f) That the sum of ₱500,000 be set aside annually from the insular treasury for a period of five years to carry into effect a program of economic development by means of agricultural colonies so located as to open up and eventually attract a current of unassisted immigration to important highly fertile agricultural regions, which it has not been possible otherwise to bring to the favorable attention of the public.

"That the National Development Co. invest money in Mindanao by purchasing the plantations that are being sold and will be sold here in the future, by fomenting agriculture and the cattle industry, and by undertaking the exploitation of its oil and iron mines, etc.

"That the Government continue its efforts toward securing railroad materials used in the war or obtain such cheap materials through other means with the object of establishing railroads in Mindanao, and adopt them in place of the construction of the present roads, which will in the end prove more costly than the railroads.

"That in case the ₱500,000 recommended in paragraph (f) can not be secured, there be appropriated every year the amount of ₱50,000, to be expended for the absolute necessities of the colony. The success of a work depends upon the measures employed, and in the absence of these the work which would otherwise be productive under other circumstances is bound to be a failure.

"That a law be enacted prescribing the conditions and requisites under which a Mohammedan marriage may be considered legal before the law.

"That a law be enacted authorizing justices of the peace of provincial capitals to exercise jurisdiction over interlocutory cases in the absence of the judge of court of first instance.

"That a court of first instance be created in a judicial district to be formed by Davao and Cotabato, Davao to be the residence of the judge.

"That a law be enacted establishing a system of insurance in which the employer pays certain premium for the insurance of the advances which he makes to the laborer.

"That the legislature, by joint resolution, adopt a program of stated amounts or definitely fixed proportional appropriations for the completion of the extension of Government control and economic development in non-Christian territory, by which these provincial governments shall be brought within a period of five years, or such other period as the legislature may decide to be feasible and more desirable, upon a basis of economic independence in the sense in which the regularly organized provincial governments are self-supporting, thereby terminating appropriations in special aid of the non-Christian provinces."

This paragraph is taken from the annual report of Gov. Carpenter for the year 1917, for the reason that I consider this recommendation extremely necessary as a definite program of the situation of Mindanao-Sulu.

Respectfully submitted.

TEOPISTO GUINGONA, *Acting Governor.*

THE DIRECTOR BUREAU OF NON-CHRISTIAN TRIBES,
Manila, P. I.

REPORT OF THE SECRETARY OF PUBLIC INSTRUCTION.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF PUBLIC INSTRUCTION,
Manila, P. I., April 19, 1919.

To his excellency the GOVERNOR GENERAL:

Pursuant to the requirements contained in the Administrative Code, I have the honor to submit the annual report of the department of public instruction for the calendar and fiscal year of 1918, and to transmit therewith the annual reports of the respective directors of the bureaus of education, health, and quarantine service, and also the report of the superintendent of private schools.

BUREAU OF EDUCATION.

Speaking generally, it may be said that unusual progress has been made during the past year along many lines in the bureau of education. One of the most important and far-reaching events in the legislative history of the islands was the passage by the legislature of Act No. 2782, entitled "An act appropriating the sum of ₱30,705,824 for the extension of free elementary instruction to all children of school age." Under the provisions of this act the sum mentioned in the title is made available in amounts specified, increasing gradually through a period of five years. Besides carrying the boon of free education to all the children of the islands this act will result in increasing the salaries of teachers at least 30 per cent before the close of the five-year period. Furthermore, in connection with other legislation passed at the recent session, it does away with the unfair burdens imposed upon the parents of children through tuition fees required for the enjoyment of the advantages of the public intermediate schools. This class distinction will be now forever abolished and all the children of the islands will have the privilege of free attendance in all the schools. This act will provide for the education of the masses and, laying the necessary foundation for a democratic form of government, will tend to assure in the future the permanency of free institutions in this country. It is now universally recognized that the stability of every free government must be based on the schoolhouse. The act mentioned will always redound to the credit of the members of the legislature, who gave it unanimous support in both houses. Their names will ever be held in grateful reverence by the people of the land and by posterity.

As a matter of course the disbursement of this fund and the administrative work and the preparation required in advance for its proper execution is a most serious, difficult, and complicated task. Upon the recommendation of this department, particularly of the bureau of education, the appropriation was spread over a period of five years. This was made necessary because from the very nature of the case it would be absolutely impossible to expend properly and to the best advantage such a large sum in less time than the period fixed of five years.

With reference to the teaching personnel, it will require much effort to obtain the increased number of teachers which will be required by doubling the number of school children to be taught. With existing facilities and the limited number of normal schools in the islands, of which only one is in complete operation, many teachers must necessarily be employed at first who will be far from filling ideal requirements. In the next place difficulties in securing proposed sites and in erecting buildings must be encountered under the existing land tenure system, and, in addition, the method of registration here will cause much delay in securing school sites, the title to which must of course be perfect. Furthermore, the construction of buildings, particularly permanent buildings, requires considerable time, not only because of the fact that the

standard buildings erected by the bureau are of concrete construction, and hence consume much time in the process of building, but, in addition, the bureau of public works, which must handle all the work, is very much overloaded with other public buildings under construction and to be constructed for which pressing demands exist, and is also very much lacking in the number of engineers and architects required for the work of that bureau.

In many barrios, due to the zealous desire of the people, schoolhouses have already been erected, but up to this time there have not been sufficient funds with which to equip them and furnish teachers. Manifestly, for the sake of economy and in due recognition of this desire for education, the department will look favorably upon such localities, and in the majority of such instances will reward such self-sacrifice by establishing the first new schools in such schoolhouses already erected. Furthermore, there are many other barrios and municipalities which will be just as eager to furnish at their own expense schoolhouses of temporary construction, and it is now the intention of the department and the judgment of the council of state that, everything else being equal, preference should also be given to communities of this class. So it has been thought, in order to rapidly carry to the people as much of the benefits of this act as is possible during the first year, in which naturally the organization for extension can not be fully completed, that the best and earliest results can be effected by taking advantage of buildings already erected and of those that will be gladly erected by the various communities mentioned. This will enable a considerable number of buildings to be available during the first year and will give time to the bureau of education to prepare for the several thousand more school buildings which must necessarily be erected during the remaining four years of the period fixed.

NORMAL SCHOOLS.

There is in reality only one normal school in full satisfactory operations in the islands. This school was located in Manila in the year 1901 and can be expected to turn out in coming years from 300 to 400 graduates each year, and possibly an increase over that number. Inasmuch as that would only supply about 3 per cent of the total annual requirement for teachers, it is manifest that a number of other normal schools must be established and put in operation as soon as possible. This policy has been recognized by the legislature in the session of 1917-18. The secretary of public instruction was authorized to locate two new normal schools, and money was appropriated for beginning the buildings thereof. These schools were duly located in the city of Cebu, on the Island of Cebu, and in Laoag, Ilocos Norte, in the northwestern part of Luzon. Work has been begun in the construction of permanent buildings for these institutions, and at the same time beginning classes have been established in the adjacent high schools, so that by the time the buildings are completed and fully equipped there will be at least second, if not third, year classes in course of instruction. At the last session of the legislature, 1918-19, another appropriation was made for the establishment of two additional normal schools and the sites required therefor, to be located in the judgment and discretion of the secretary of public instruction. Accordingly, Iloilo, in Panay, and Albay, in Albay, in the southeastern peninsula of Luzon, have been selected as the sites of these two normal schools. At both these last-named places the respective Provinces in which they are located have agreed to make liberal contributions. In Iloilo this contribution will be largely used to purchase a site of 20 hectares directly opposite the high-school site. The United States Government will probably donate the grounds used at Albay as a military reservation, formerly known as Regan Barracks, for the site of the normal school located there. These grounds comprise about 80 hectares and have an excellent water system. The contribution made by the Province of Albay for the school will be used, in addition to that provided by the legislature, in the construction and equipment of buildings.

There was established two years ago a normal school at Zamboanga, and a beautiful main building is just being completed at a cost of ₱200,000. The school, however, is in the slow process of development and has little more than a mere paper existence as far as the number of actual normal students is concerned. This is due to the fact that there is no high school in Mindanao which has progressed far enough in the education of its pupils to qualify them for entrance into a normal school. Accordingly this building will be used first to develop the necessary material by means of the high school instruction and afterwards, when such material is prepared to enter the normal school, the

pedagogical instruction will begin. Until that time it can not be said as a matter of fact that the Zamboanga normal school has a real existence.

The fact that in the coming five years the school attendance under the act providing for universal free education will be at least doubled makes it clear that at least 14,000 new teachers must be required during the next five years for such added attendance. In this connection it must be considered that, owing to deaths, marriages, and transfers to other occupations, there will be required a necessary annual replacement. This replacement is estimated to be at least 20 per cent for all teachers, regular and temporary. Meanwhile, during this five-year period, the entire school population will be greatly increasing, and that increase, added to the present numbers now outside the existing schools, will require a total of at least 18,000 new teachers during the next five years. As a matter of course, to meet this great demand, it will be necessary to take all the graduates of the normal school at Manila, the number of whom will be negligible because so small, and to secure as many graduates as possible of the high school, which will probably meet 10 per cent of the demand, and to obtain the great majority of this body of teachers needed from students who have not yet completed the secondary course. It is therefore evident that from the necessities of the case the number of trained and well-educated teachers for the next 10 or 15 years will be comparatively small. It follows that it should be the educational policy of the country to continue the establishment and development of other normal schools. A very low minimum of the number which should be established would be one for every million of inhabitants, while an entirely adequate provision would require at least double that number.

AGRICULTURAL SCHOOLS.

The supervision of agricultural work in the bureau of education is vested in the superintendent of agricultural instruction, who devotes himself solely to this activity and who furnishes those in the actual teaching work such information and counsel as seem to him advisable. One marked feature of all the public schools, with very rare exceptions, consists in practical instruction given to the children in the work of gardening. Attached to each public school is a garden, in which various pupils are respectively assigned small plats and which they plant and cultivate under the immediate supervision of the teacher having charge of that work. In addition to that, the children are encouraged to also have, if possible, and with the consent of their parents, any such sufficient grounds as may be available to cultivate home gardens. Before this special work was inaugurated in the Philippines, vegetable gardens were practically unknown, and the people generally subsisted upon a very narrow diet, consisting largely of rice and fish and the native fruits. As a result of the persistent effort made by the bureau of education throughout the islands, tens of thousands of children during the past few years have received practical instruction in garden making, which in most instances they have carried back to their homes and parents. Now, throughout the country the people are generally beginning the cultivation of kitchen gardens, which increases the variety of their diet, adds to their health and strength, and reduces to a very considerable extent the expense of living.

Under the present practice of the bureau of education and for over 10 years, the children have been instructed and encouraged to plant fruit trees and shade trees as well as ornamental plants. A large number of the primary schools have developed small nurseries, and in some cases school nurseries have been established from which thousands of cuttings of ornamental shrubs and fruit trees have been distributed to the other schools. The number of school nurseries increased from 115 in 1915 to 1,201 in 1918. The number of fruit trees distributed in that period increased from 10,736 to 83,524, and the total number of trees and plants distributed increased during that interval from 41,126 to 159,030. After these distributions, there were reported to be at the close of the last school year, 190,986 trees and plants in the various school nurseries. In this connection, attention is called to the fact that Arbor Day has been observed annually since 1906, and in 1917 and 1918 the Governor General issued Arbor Day proclamations, designating the first Saturday in October as Arbor Day, and calling upon not only the children but public officials and all citizens to endeavor to carry out the objects stated in the proclamation.

The bureau of education is working along various lines, some of which can not be mentioned for lack of space, in its agricultural activities. There are now 138 agricultural schools, which may be classified as follows: Agricultural

schools, of which there are 9; farm schools, of which there are 12; and settlement farm schools, of which there are 117. In addition to this, there is the Central Luzon Agricultural School, at Muñoz, in which the methods adopted are very similar to those at Hampton Institute and the schools established by Booker T. Washington at Tuskegee. In December, 1918, there were 1,001 students enrolled in the Muñoz School, an increase of 256 over the previous year. The students represent 28 out of the 40 Provinces. The school itself is a center from which an influence for better methods and tools radiates to the surrounding country. The superintendent of the school gives his advice and assistance to the neighboring homesteaders, and they have organized a system of communal irrigation, also a credit association, and have cooperated in improving their domestic animals. The method adopted by the bureau in the operation of the agricultural schools is to establish, as a general rule, a school building and a dormitory upon a large farm suitable for the work intended. Such schools are therefore practically boarding schools and the pupils are selected and subsisted by the Government. These schools are all located in districts which are thinly settled, and they have greatly influenced methods of planting and cultivation and the opening of homesteads on the public lands in their immediate neighborhood.

The farm schools give instruction in the farm course to the boys and the housekeeping and domestic arts course to the girls, in connection with practical work for both sexes on the model farm ordinarily from 16 to 40 hectares in extent. These schools are day schools and seek to inculcate practical knowledge for the boys and to give home training to the girls in connection with farm life and the duties naturally incumbent on women on the farm.

Settlement farm schools are organized and operated as the centers of settlements, which ordinarily include a group of homesteads upon the public land in the immediate neighborhood of each school. These schools are open throughout the entire year, and the pupils who do practical farm work throughout the entire course spend half of the day in the classroom and the other half in work on the farm.

This system of agricultural instruction should be continually developed and extended until the whole possible field of work is covered. In connection with this development and extension there are certain economic facts which must be taken into account. The Philippine Islands constitute a land of vast but undeveloped agricultural resources. While the tropical products of the country constitute a considerable group of the world's necessities, their production may be said to be restricted, and the area under cultivation is not only limited but is tilted by antiquated methods, which yield inadequate returns.

A study of the situation reveals the fact that the islands may roughly be divided into agricultural districts based on the products raised. Thus, there is the tobacco district of the Cagayan Valley, the rice district of central Luzon, the sugar district of Negros, the hemp district of the Bicol Provinces and the Visayas, and the coconut district of Laguna and Tayabas. While many of these districts overlap and many others not mentioned are important to the economic welfare of the country, the fact that a limited number of products will be grown in a given district may be taken as a basis for agricultural development.

These facts have an immediate bearing on the solution of the problem of establishing a system of agricultural education throughout the Philippine Islands. It is not possible, for example, to grow hemp or coconuts at the agricultural college at Muñoz, which is situated in the midst of the rice district. Neither can practical instruction be given in many of the other staple products. A student who comes from the hemp district or from the sugar district can not be given instruction which will immediately fit him for service in his locality. During the past year, as stated, students were enrolled at Muñoz from 28 different Provinces. While book instruction was given, the students from many of these Provinces did not receive the practical training which would fit them directly for the particular agricultural work of their home Provinces.

There is only one satisfactory solution to this state of affairs, and that is to open up schools in all agricultural districts similar to the Central Luzon Agricultural School, at Muñoz, which will give specific training along such lines as count for the economic development of the surrounding district along with the necessary general agricultural instruction. There should be, in this sense, a tobacco school in the Cagayan Valley, a sugar school in Negros and perhaps another one in Pampanga, a coconut school in Tayabas or Laguna, and a fiber school in Leyte.

Experience has proved that such schools will readily become community centers for the agricultural development of a considerable area. An adequate system of agricultural instruction would necessarily mean a chain of such community centers, which would have for its purpose the economic development of the whole country as well as elementary textbook instruction for our future farmers. Many of the country's natural resources now lie dormant. They are undeveloped largely because the people are backward and also because of a lack of economic leadership. Communities in order to advance must make such improvements as tend to elevate the standards of life. A large number of agencies have been working toward this end for many years, and in most cases the conditions are favorable for constructive work along lines which will promote the agricultural welfare of the country. The 10,000,000 people occupying one of the world's most fertile areas constitute a great potential resource, but the great need is practical agricultural education and the resultant intelligent direction and control, so that the general development of the productive-land areas of the country may become an accomplished fact.

Without discouraging in any way the old educational systems of the past it should be noted that much of the training was given for the purpose of raising the individual above the ordinary in culture and intelligence. To shine rather than to serve was the motive behind the courses of study. The present trend has reversed this tendency, and the Filipino people now realize that the innovation is the salvation of the country. The educational system under the Spanish domination seems to have been fitted for turning out political leaders, but did not prepare them to be leaders in the economic development of the country. The establishment of a complete system of agricultural education would do more than anything else to remedy this defect.

At the present time the industries are outgrowing the personnel. In the sugar industry, for example, foreigners are used as field foremen, machinists, and factory overseers, at five times the salary received by Filipinos. There is no reason why Filipinos should not qualify for similar positions. This can easily be done if sugar schools are established in the locality where there are sugar centrals and if the educational authorities cooperate with the established industry in order to develop and train men for service in the field or factory. The same may be said of the coconut-oil industry and of tobacco.

Tremendous losses at the present time are occasioned by inability to accomplish many things which are necessary to the economic development of the country. In the vicinity of the Muñoz Agricultural College, for example, the adjacent stream if put upon the land would add to its value a minimum of ₱1,000,000 and would increase the annual production of rice a minimum of ₱2,000,000. This stream has so far, like countless other streams, been running in waste to the sea, and the country suffers from the consequent loss in rice production. In view of the fact that the country is annually facing a rice shortage when it should be a large exporter of rice, such a state of affairs should be remedied. To this end the students who are practically trained in rice cultivation and the simple methods of irrigation at the Muñoz school may be confidently expected to do their full part, and thus render a service of great value to the country.

TRADE AND SPECIAL SCHOOLS.

The Philippine School of Arts and Trades in 1918 enrolled 562 students. During the past year the construction of a new building for academic classes on the trade-school grounds to cost ₱300,000 has been begun, and it is expected that the building will be ready for occupation at the opening of the regular school year in June. The usual handicap of the scarcity of labor has been largely overcome in the erection of this building, since a large number of the students of the school have been engaged from the beginning in the work of its construction. This has set forward very much the completion of the work.

THE NAUTICAL SCHOOL.

In 1918 the Philippine Nautical School separated from the Philippine School of Arts and Trades. The nautical-school building was located in the southern part of the city, facing the bay, and was completed in July of that year, much of the work in the erection of the building and the residence for the superintendent having been done by the students of the trades' school. In December, 1918, the nautical school had enrolled 57 students. These students live in the school dormitory under the same discipline as that observed ordinarily on board

ships. Students are divided into watches, which are under the command of officers selected from the senior class, and they take regular turns in keeping the school dormitory in shipshape condition. The course of the nautical school provides for two years of work on the shore and for 18 months of apprentice work on board an interisland vessel. Many graduates of the nautical school are already occupying responsible and lucrative positions in interisland and trans-Pacific shipping vessels, and shipowners are very desirous of securing them when possible.

SCHOOL OF COMMERCE.

The Philippine School of Commerce is still in lack of a suitable building, and it is housed in rented quarters quite unsuitable for school purposes. Lack of space puts a limitation on the number of students that can be accommodated, and it is believed that in the event a legislative appropriation is made for the construction of a new building the enrollment would be doubled in a very short time. There is a one-year course in stenography, and this is open only to high-school graduates. In addition, the school offers a three-year course in commerce, a two-year course in bookkeeping, and a two-year course in stenography. Proficiency in English and arithmetic is required as a prerequisite for entry into either of the long courses. The demand for stenographers and bookkeepers has been such that it has been impossible in recent years to retain these students in the school until they complete their courses. However, arrangements have been made by which students who accept positions before graduation can continue their studies in the night-school classes conducted for five nights of each week, and this offers an opportunity to young men and women who are employed during the day to obtain a commercial education. It is a lamentable fact that the Filipinos are much behind their efforts along other lines in mercantile and commercial activities. Largely the retail mercantile business of the country is in the hands of the Chinese, and exportation and importation are in the hands of Americans and Europeans. To improve this condition and better enable Filipinos to participate in the business of the country, a number of schools of commerce should be established at the various commercial centers of the islands in order to train the youth of the land for business pursuits. Furthermore, it would seem desirable to maintain a commercial course in each of the four-year high schools in the islands. The bureau of education has already succeeded in substantially directing the minds of the coming generation to agricultural and industrial pursuits. It is hoped that the same success will be met in the near future in turning out sufficient young men and women who shall be qualified to begin business life and commercial vocations, and thus enable the Filipinos to at least largely participate in the conduct of the business and commerce of their native land.

PHYSICAL EDUCATION.

During the whole course of the development of the educational system of the islands, particularly during recent years, instruction in physical education on the part of the pupils has been given much emphasis. It is the consistent attempt of the bureau to extend and systematize this work along the best approved modern lines. This entire matter was submitted to a special committee of the superintendents' division of the regular annual convention of teachers in Baguio in May, 1918, and after considerable work, covering a period of several months, a manuscript was completed for the course of instruction in the graded schools and will soon be printed and in use throughout the islands. In the high schools, the intermediate schools, the special schools, and the university, much attention is given to athletics, particularly baseball and track contests. The result is that baseball is played throughout the islands by the children in the primary and intermediate schools, as well as by the high school students, and is practically the national game here, as in the United States. It is believed that these athletic sports will not only induce better health and better physique on the part of the Filipinos, but that, in addition, it will have an effect upon the development of the character of the average Philippine youth. The effect will be to give him a feeling of physical confidence and activity, and will develop the capacity to think quickly and decide promptly, and in every way augment his physical courage. But, further than that, the playing of athletic games, according to the ethics of such sports, will develop a spirit of fairness and honor and generosity toward opponents.

It is a matter of common observation that the boys and girls in the public schools show an unmistakable increase in size, weight, and physical stamina over those outside the schools and those of the previous generation.

During the coming month of May there will be held in Manila what is known in the Orient as the Far Eastern Games. China, Japan, and the Philippines will be represented by amateur athletes in baseball, tennis, swimming, and other games, and, in addition, all the recognized track sports. These Far Eastern Games are modeled after the Olympic Games which have been held in Europe during recent years, and they have not only a tendency to develop athletics in the Orient, but also to bring about closer and more friendly relations between the peoples of this section of the globe.

SCHOOLS FOR THE DEAF AND BLIND.

At the recent session of the legislature, and on the recommendation and special request of this department, an appropriation was made for the purchase of a site and construction of a new concrete building as a school for the deaf and blind, which has heretofore been housed in an old building. This building will be so constructed that it may constitute a unit, with others to be added as time passes, for the accommodation of deaf and blind students, or, if deemed best in the future, it may be turned over to the bureau of education as an ordinary schoolhouse and a new asylum for the deaf and blind constructed on another site. This is a step forward in the proper recognition of the needs for instruction of these poor children who have been deprived of their natural senses, and thus are in a situation which imperatively demands such instruction as may make them self-supporting and more happy under such conditions.

SCHOOLS FOR NON-CHRISTIANS.

One of the most difficult problems which confront the administration and the legislators in the islands is to take such steps as experience has proved to be best to bring up to a higher plane of civilization those elements of the population who are partially civilized and also, particularly with the rising generation, to educate in a practical way their children so that they will abandon their unsettled and wandering life and attach themselves to homes where, by the cultivation of the soil, they can begin a steady progress toward the culture and civilization of the majority of the Philippine population. These backward peoples, sometimes spoken of as non-Christians, are of four different classes, that is, the people dwelling in the mountains of northern Luzon; the Moros or Mohammedans of the Southern Islands; the Bogobos or Manobos, primitive people wandering through the forests without settled abodes in the island of Mindanao; and the Negritos, a scattered race with apparently no racial connection with the remaining peoples of the islands. This work will require many years and will be difficult and painstaking. It must be done principally with the children and in many instances, to be efficient, they must be segregated in dormitories and farm schools and taught new customs, practices, and habits, and be instructed in the cultivation of the various food products grown locally.

ENGLISH THE LANGUAGE OF THE FUTURE IN THE PHILIPPINES.

The teaching of English in the public schools has now covered a period of almost 20 years. As a result of this many thousands of young men and women now entering the activities of life possess a fair knowledge of the English language and use it in their daily contact with each other and with many others who have acquired the language. Some of these young men are already holding prominent positions in the public schools, in commerce, Government service, and every other walk of life, and their numbers run into hundreds of thousands. The language most spoken to-day and most widely disseminated and best understood in the Philippines is the English language. Furthermore, there is connected with the University of the Philippines, with other higher educational institutions of the islands, and in all the important activities of insular life a large number of young Filipinos who have been educated in American colleges and universities. These and many of the young men and women who were educated in the public schools, in the high schools, and the normal schools are beginning to take their logical places in leadership and influence in every

activity in the Philippines. As a result of the legislative appropriation of more than ₱30,000,000, heretofore adverted to, and which provides universal free education for all the children of the islands, this country is destined to be one of the several nations of the world scattered in every portion of the globe where the English language will be spoken. At this time the political leaders and the heads of the departments and of many of the bureaus and divisions of the Government largely speak Spanish more fluently than English, but this condition is fast changing, and in the course of approximately 15 years the English language will not only be the common medium of exchange among the people generally but will be the language which will practically be exclusively used in the Government and legislative service. As indicative of this situation, it is reported that the majority of the subscribers to the newspapers and periodicals published in English in the islands are Filipinos. The native dialects will continue to be used for home purposes for many years, possibly for one or two generations. They can not afford a medium of intellectual exchange because of the poverty of their vocabularies and because those speaking the various dialects are unable to understand each other. But at present already one-half of the people of the islands under the age of from 30 to 35 years are daily communicating with each other in business and social intercourse through the medium of the English language.

PHILIPPINE HEALTH SERVICE.

On December 31, 1918, Dr. J. D. Long, the director of health, severed his connection with the Philippine health service by resignation, as a result of which Dr. Vicente de Jesus, the assistant director, was later designated acting director of health. In the loss of the services of Dr. Long the bureau of health has been deprived of the valuable services of the man who had been directing its arduous work for many years, during which time great achievements were effected in the promotion of the public health along many important lines.

The year 1918 was characterized by successive occurrences of serious epidemics, which required the continuous activity of the medical staff. The hearty cooperation of health authorities in the several campaigns for the prevention and suppression of diseases has been fruitful to the extent of a gradual acquirement of knowledge of the means of introduction, infection, and spread of diseases, and their future prevention and control, as far as applicable, to local conditions.

EPIDEMICS.

Smallpox was prevalent in Manila and in almost every Province, Rizal, Cota-bato, Davao, and Lanao having been most seriously affected. At the close of the year 16 Provinces were still registering cases in sporadic form. There were registered in Manila 1,326 cases and 869 deaths, and in the Provinces 40,126 cases and 12,951 deaths.

This unfortunate spread of the disease during 1918 was due to two causes: In December, 1917, two natives of Palawan, father and son, were rescued from shipwreck and brought to Manila, both developing smallpox upon their landing. In that same month an English sailor from Nankin, China, arrived in Manila and developed smallpox on the following day. Since June, 1909, Manila had been practically free from smallpox, but shortly after the occurrence of the above cases the epidemic spread rapidly, reaching its climax in April, May, and June, and in July it was largely put under control, but the danger existed that it might break out in various Provinces in the future. A vaccination campaign was begun at once, both in Manila and in the Provinces, but owing to the exhaustion of the supply of vaccine virus the work could not be carried on as extensively as it was desired. A large quantity of this supply had to be imported from Saigon and Shanghai. Vaccinations to the number of 414,410 were performed in Manila, with 69,579 positives, the small number of positives being due to the yearly vaccination and revaccination of the people. In the Provinces, including those of the Department of Mindanao and Sulu, 3,545,136 vaccinations, with 2,117,237 positives, were performed. A total of 5,136,400 units of vaccine were issued by the bureau of health, and more than 200 temporary vaccinators were appointed to help in controlling the epidemic. It is estimated that by the end of the year 1919 almost all the people in the Philippine Islands will have been vaccinated. Steps will be taken so that a continual process of vaccination can begin shortly after the birth of every child, and be renewed as

a condition precedent to entry in the public schools, the latter practice already existing. In five years practically all the children of the islands will be admitted to the schools, and that measure of itself will operate very largely as a preventive to this disease. These provisions, with an annual inspection for the unvaccinated and their vaccination when so discovered, ought practically to end the ravages of this epidemic.

Influenza, with its widespread disastrous effect, occurred twice during the year—in May and June, and in October and November. The peculiar care and precautions necessary for its prevention being unknown to the great majority of the people, a larger number died than would have succumbed otherwise. Deaths were due to complications of the respiratory organs in most cases, and in other cases generally to complication of the heart or other organs. The first outbreak was not so disastrous as the latter, which in 45 days gave a record of 37,950 cases, with 1,156 deaths in Manila, so that the health facilities were found to be inadequate to meet the situation. Hospitals were overcrowded and admission had to be restricted to the most serious cases, the rest having been supplied with medicine and treated at home. A bulletin containing prophylactic advice against the disease was printed and distributed, which gave considerable relief to the situation. In like manner the epidemic occurred in the Provinces, spreading in September to an alarming extent. Not a single Province, municipality, township, or barrio escaped its ravages. All physicians on the waiting list were temporarily employed, and medicine was distributed free in infected localities. In Cotabato about 95 per cent of the population was attacked by influenza during its maximum intensity. Shortage of medicine and sickness of the hospital personnel handicapped the service. The astonishing rapidity with which the epidemic spread made preventive measures taken of no avail. In Agusan about 20,000 cases, with 521 deaths, were registered. In Davao 4,628 cases, with 447 deaths, were reported. Two plantations were quarantined and, as a result, the people living there escaped the disease. In Zamboanga 70 per cent of the population was attacked. The mortality ranged from 7.8 to 15.21 per 1,000, there having been 80 per cent of the people of Dipolog and Lubungan subjected to the disease. In Lanao a few cases occurred, which is attributed to the comparatively high altitude of the Province and its climatic conditions. In Cagayan from 70 to 80 per cent of the people were attacked, deaths from influenza exceeding those from cholera and smallpox. In Sulu the epidemic was most intense in October and November, when the health and hospital personnel was attacked, as well as a large part of the constabulary soldiers. Judging from the records not yet completed, the director of health is of the opinion that about 70,315 deaths from influenza will be registered for 1918. It is estimated that about 40 per cent of the population of the islands was affected by the epidemic and that 2 per cent of the cases were followed by death. The effect of influenza upon business and agriculture was sudden, marked, and acute. In many localities farms were abandoned, crops were left to waste, and shops were closed for lack of men and schools for lack of attendance.

Cases of cholera occurred in the Provinces throughout the year, but were less severe than in 1917, when a total of 13,082 cases with 7,959 deaths were reported. In the same year 25 cases and 8 deaths were reported in Manila. In 1918, 7,533 cases and 5,168 deaths were reported from the Provinces; and in Manila 401 cases with 107 deaths occurred. In the Provinces, the disease could not be considered as epidemic, as it was of a scattered nature, and was always promptly controlled. The disease prevailed most in the Provinces of Bohol, Capiz, Cebu, Hilo, Antique, and Oriental Negros, occurring in the Provinces of Leyte, Sorsogon, Cavite, Rizal, Pangasinan, Batangas, and Tayabas toward the latter part of the year. Fourteen municipalities in Pangasinan are still infected, registering at the close of the year 923 cases and 719 deaths. In the department at Mindanao and Sulu cases of cholera occurred in most of the Provinces during the year, the Provinces of Misamis and Surigao having been most seriously attacked. A total of 2,565 cases with 1,612 deaths in the entire Department were registered during the year. A large number of specimens were examined for cholera by the bureau of science and measures promptly taken to prevent its spread whenever it occurred. The cholera problem will, however, remain unsolved until adequate water systems and proper sewage disposals are adopted throughout the Provinces. It is believed that influenza had a weakening effect upon the resistance of the body so that a larger percentage of mortality was registered than in 1917.

OTHER DISEASES.

No case of either human or rat plague was reported during the year, but, owing to the increasing number of rats near the piers and along the entire seawall of the bay, steps should be taken to fill in the interstices with concrete, beginning at the piers and gradually completing the work. Otherwise, should the rats become infested with the fleas which carry the bubonic plague, there will result a terrible mortality from that disease. As this plague is active in many ports of the Orient, this menace constantly exists. Dysentery occurred from time to time in isolated places in a mild form. In like manner cases of typhoid fever were registered in Manila and in the Provinces. In Manila 58 deaths from rabies were registered, and 75 cases of diphtheria with 15 deaths were reported. During the year, 1,168 cases of tuberculosis were reported in Manila. Of the 650 cases at San Lazaro Hospital 257 died. Reports from the Provinces are still incomplete. In the Department of Mindanao and Sulu malaria was present in every Province, there being more than 14,666 cases reported. Distribution of quinine, establishment of sanitary barrios, and drainage of lowlands were among the measures taken against the disease.

HOSPITALS.

In September, 1918, the Zamboanga General Hospital was opened, and at present a large hospital at Davao is under construction. More than 50 emergency hospitals were established in those Provinces where epidemics reached alarming proportions. During the month of November and early part of December the Baguio hospital was unable to accommodate patients suffering from influenza. The bureau of public works and the city of Baguio had to provide provisional hospitals for their laborers, and the agricultural school had to utilize one of its buildings as a temporary hospital for the students. The same condition prevailed in the hospital at Bilibid Prison, where about 2,000 patients had to be treated in their respective apartments.

PROVINCIAL CEMETERIES.

Thirty-one cemeteries were reported in 1918 as being insanitary against 67 in 1917. Eighty new and 13 old cemeteries were approved.

SANITARY WORK IN THE PROVINCES.

Six Provinces were organized into sanitary divisions during the year, so that only seven Provinces remain to be organized, five of which will effect their organization during the present year.

Twelve gravity systems and 2,048 artesian wells are now in operation. Owing to lack of proper machinery, only 248 artesian wells could be drilled in 1918. Seventy thousand closets of the Antipolo type are in use at present, and 243 municipalities have passed ordinances providing for the installation of the same. In the Department of Mindanao and Sulu the septic tank and the pall system are also used. The manufacture of earthen vitrified pipe for the installation of the Antipolo system has also been successfully developed and about 4,000 pipes were sold, some of which were used for draining premises or used as walls for wells. In the Cullion Leper Colony important improvements were made, such as the construction of a Protestant chapel, a leper clubhouse, and a leper schoolhouse. Houses were built and certain improvements made in the new sanitary barrio. Four lepers were provisionally released upon showing negative results of examination for more than two years.

Considerable activity has been displayed in health, education, and publicity, which consisted chiefly of lectures given by health officers and nurses in public gatherings, such as carnivals, exhibitions, "ferias," and garden days. District nurses continued their visits from house to house, treating the simple cases of diseases and giving advice, especially to mothers and parturient women, on sanitation, housekeeping, and balanced diets, demonstrations of which were given. The work for infant welfare was carried on more vigorously. About 150,000 houses were visited by the district nurses, who gave instructions in hygiene, nursing, and diet. That the value of this work is rapidly being realized is shown by the numerous calls for nurses and midwives and by the increased number of deliveries in the hospitals. Attendance in the dispensaries has also increased, thus showing the greater confidence of the people in scientific treatment. One

of the most important features of sanitary work is the medical inspection of schools, which gave the children considerable relief from their ailments particularly toothache, skin diseases, and tonsillitis. It is hoped, therefore, that the means and facilities for the assignment of surgeons to every school will in a short time become available.

Under the provisions of Executive Order No. 38, which was issued by the Governor General for the protection of the Philippine National Guard against dangerous communicable diseases, the undersigned approved a set of sanitary regulations submitted by the director of health, which provide for all necessary measures designed to prevent the occurrence or spread of contagious diseases. Under these regulations, the Philippine health service, on November 4, 1918, created an extra cantonment zone within a circle of 7 miles' radius from Camp Claudio and with a population of about 107,914. Sixty-four artesian wells were drilled in this zone. The creation of the extra cantonment zone was instrumental in checking the spread of contagious diseases and in securing practical results in general sanitation.

COUNCIL OF HYGIENE.

The council of hygiene held regular sessions, as required by law, in which several routine matters were transacted. A number of special sessions were also held, in which attention was devoted to matters requiring legislation.

FOOD AND DRUG INSPECTION.

The board of food and drug inspection exercised the same strict supervision over shipments of food held at the customhouse and over all manufactured food in general. Like functions were exercised over drugs and patent medicines until February 28, when such duties were transferred to the board of pharmaceutical examiners and inspectors by Act No. 2762. Dairies selling milk in Manila have installed the necessary apparatus and endeavors were made to stop their practice of watering milk. Nine administrative decisions were rendered, and instructions were given for the proper method of manufacturing nipa vinegar. An equal number of convictions were obtained for violation of the law.

Thus it will be seen that the Philippine health service has made satisfactory progress during the year. The organization of Provinces into sanitary divisions, of women's clubs for the protection of early infancy, and of other societies for the promotion of the health conditions, together with the installation of water supplies and the adoption of sewage disposals and other sanitary improvements, all bespeak the earnest endeavor of the health officials as well as the support of the people in solving one of the most vital problems of these islands.

BUREAU OF QUARANTINE SERVICE.

On December 31, 1918, Dr. J. D. Long, chief quarantine officer for the Philippine Islands, was relieved from his duties in the bureau of quarantine service by Dr. T. R. Thompson, who assumed charge of said office by order of the Surgeon General of the United States Public Health Service.

As in past years, the aim of the service has been to prevent the entrance of quarantinable diseases into the Philippine Islands without causing unnecessary delay to vessels and their passengers, particular attention having been given to urgent need for all available tonnage of the United States and the allied nations and all possible assistance rendered in carrying such need into effect.

The functions of the bureau of quarantine service consist generally of national quarantine, consular quarantine, interisland quarantine, immigration inspections, sanitary maintenance of vessels and ports, physical examination of applicants for marine licenses and other government positions, and miscellaneous functions not included in the preceding classes.

Quarantine procedure has undergone a change from that of the past commensurate with the advanced knowledge of the means of transmission of diseases and their prevention. Of the eight quarantine stations operated in Manila, Cavite, Cebu, Iloilo, Jolo, Mariveles, Olongapo, and Zamboanga only those at Mariveles and Cebu are fully equipped for the disinfection and fumigation of vessels as well as for the care and hospitalization of suspects. Adequate equipment and quarters are also maintained at these stations. At

the other quarantine stations full equipment was not maintained in view of the limited shipping touching there, and vessels entering such stations which needed complete disinfection and quarantine for the personnel and passengers were sent to Mariveles or Cebu for that purpose. This procedure was followed without unnecessary hardship and with the least possible delay.

SANITARY CONDITIONS OF THE ORIENT.

The continued improvement of sanitary conditions in oriental ports has been greatly due to the requirements of the United States quarantine laws and their enforcement in the Philippine Islands and United States ports. Other ports which maintained continuous shipping with the United States and Philippine ports have had to take the necessary steps to comply with such requirements. The healthful conditions of oriental ports lessen the introduction of diseases which may enter the islands. The quarantine service is assisted by the American consulates in all the principal ports of the world, and the continual presence of prevailing diseases elsewhere requires the maintenance of quarantine measures in the Philippine Islands. The quarantine procedure in United States ports against the Orient is less complex than that of the Philippines against the same ports, due to the length of the sailing period, which is sufficient for the development of the disease prior to the arrival of a vessel in a United States port. There are many diseases in various ports which the islands must guard against. The quarantinable diseases from Canada and Mexico are mainly smallpox and typhus fever, and from Central America, Mexico, and South America yellow fever, which, if introduced into the Philippines, would likely depopulate the islands. But there are several factors operating to prevent the entrance of these latter diseases, namely, shipping between South and Central American ports and the Philippines is partly carried by vessels passing through the Panama Canal, where special preventive measures are taken by the officers of the United States Public Health Service in charge of quarantine in the Canal Zone to prevent infected vessels from carrying the disease into the zone, the long period of time needed by such vessels to reach the Philippines, and the special quarantine procedure at Philippine ports for such vessels.

It may be noted here, however, that since the war has ended direct shipping lines between South America and the Philippines will possibly be established, and consequently stricter precautions will be necessary. In Java, plague, smallpox, typhus fever, and cholera were present in epidemic and endemic form during the year. Plague and smallpox were more active than cholera in India. In Singapore plague was most active for three months, after which the cases and deaths decreased. Smallpox, malaria, dysentery, pneumonia, diphtheria, tuberculosis, typhus fever, and influenza were also reported, but only malaria, dysentery, and pneumonia were prevalent. From Indo-China a considerable number of deaths caused by cholera, plague, and smallpox were also reported. In China, as a whole, plague, smallpox, and typhus fever were continually present, but not in dangerous epidemic form. Epidemic meningitis was the only disease which assumed serious proportions in Hongkong. The Philippine quarantine service is taking all the necessary measures to prevent its introduction into the Philippine Islands. Several diseases were also reported from Amoy and Shanghai, but not in such epidemic form to be a menace to the Philippines. In general, typhus fever, smallpox, and pneumonic plague were reported from Japan, but none of these diseases was prevalent in epidemic form. In Yokohama only typhus fever occurred in a mild form, while in Kobe smallpox, typhus fever, and dysentery caused a considerable number of deaths.

QUARANTINABLE DISEASES.

The decrease in the number of persons found infected with quarantinable diseases was due to the continuous improvement in sanitation on vessels coming to the Philippine Islands from foreign ports and to the thorough vaccination of crews and emigrants prior to their embarkation for the Philippines. *Inter-island quarantine* was of great assistance in controlling the spread of cholera and smallpox. Every necessary measure was adopted to detect cases on board all vessels, developed or undeveloped, of all quarantinable diseases, and steps were taken to prevent their dissemination.

INCOMING QUARANTINE.

Considerable knowledge of the health conditions at all oriental ports was found to be necessary to the boarding officers for the inspection of incoming vessels. Vessels entering the Philippines for the first time necessarily had to

spend longer time for inspection on account of their unfamiliarity with the quarantine procedure. Regular vessels are dispatched in a short time, varying from 10 to 40 minutes, according to the number of persons on board. In order to give the boarding officers effective view of persons to be inspected, it has been necessary to make quarantine inspection only during daytime. The slight delay caused by these requirements to vessels entering the Philippines after sunset was more than offset by the benefit resulting from inspection made by daylight.

CONSULAR QUARANTINE.

American consuls and officers of the United States Public Health Service abroad continued to extend invaluable services to the Philippine Islands by enforcing United States quarantine laws and regulations.

The following table gives part of the operation in the consular quarantine:

Bills of health issued.....	208
Crews inspected.....	23, 669
Passengers inspected:	
Cabin.....	8, 828
Steerage.....	15, 773
Pieces of cargo inspected and certified.....	7, 827, 652
Vessels disinfected and fumigated.....	23
Vessels inspected.....	194

FUMIGATION AND DISINFECTION OF VESSELS.

Fumigation of vessels at Philippine ports was continued as an antirrat measure and in order to maintain cleanliness on board and to save cargoes from damage by rats, cockroaches, and other insects. This process, which was carried on as many times as necessary, brought out effective results. After fumigation, all interisland vessels were required to be cleaned and to renew their painting. Also arrangements for food, water tanks, toilet facilities were inspected and necessary changes recommended. The presence of plague in foreign ports touched by vessels engaged in foreign and interisland trade also necessitated the fumigation of vessels.

In Manila 18 vessels were disinfected for having quarantinable diseases on board, for the prevention of smallpox, and also the crews of interisland vessels were vaccinated. Agents and owners of such vessels were warned against the employment of men who did not have certificates of vaccination and were required to bear the cost of disinfection whenever a case developed in a member of the crew who did not hold such a certificate. Considerable aid was given to the Philippine health service in disinfecting vessels carrying lepers.

INTERISLAND QUARANTINE.

Interisland boats without sickness on board were allowed to enter ports without inspection, but were required to call at a quarantine station for inspection whenever any case of illness occurred on board.

MEDICAL INSPECTION OF IMMIGRANTS.

Due to the limited personnel of the service, officers doing boarding duty were also required to make examination of aliens on shipboard and at the quarantine office and immigrant detention stations. Out of the numerous vessels examined in the ports of Cebu, Iloilo, Jolo, Manila, and Zamboanga only 18 in Zamboanga were rejected, principally for trachoma and favus. Rejections have decreased in number, for the immigrants, who were mostly Japanese, were examined by the company's physicians prior to leaving Japan to prevent the introduction of the disease into the haciendas. In the Philippines trachoma is present in a mild type. Precautions should be taken against this disease, which causes defective vision. In conducting medical inspection, hookworm and other intestinal parasites have been found.

DOCK INSPECTION.

In spite of the little trouble which was had with regular boats calling at Philippine ports, daily inspection was maintained, and vessels were required to use rat guards. The bay and shore line were kept clean by daily inspection.

EXAMINATION FOR MARINE LICENSES.

Applicants for marine licenses were completely examined physically, for only physically sound men with normal color perception and good vision were admitted.

AIDS TO OTHER SERVICES.

As in previous years, the quarantine service continued to be of considerable aid to the other departments and bureaus of the Federal and Philippine Governments, furnishing at the same time information to foreign consuls regarding shipments of certain cargoes to their countries. During the war an officer was granted leave of absence to enter the medical corps of the Philippine National Guard, and Mariveles was used by the Navy as a base of the patrol maintained in Manila Bay.

NEEDS OF THE SERVICE.

The needs of the quarantine service were never exorbitant. Improved methods of conducting quarantine enabled the service to extend its work with the same personnel and a little increase in the cost of operation. However, the maintenance of quarantine buildings, launches, etc., are a constant demand, such as the cabin passengers' barracks at Mariveles, which requires reconstruction, and the attendants' quarters, which need immediate repair. At Cebu, the maintenance of a complete station for disinfection, sterilization, and fumigation of vessels and their passengers and cargoes for the southern islands is very necessary. Some of the buildings of the station are badly in need of repair, while others have to be rebuilt. Also the entire plumbing system of the island should be renewed.

At Manila, two launches are used by the service—the *Zapote*, a medium-size launch, and the *Mercury*, a small gasoline launch. The *Zapote* has been in daily use for 20 years. The expensive, continuous repairs necessary for this launch require the purchase of a new one as a matter of economy to the Government. Such a launch, if purchased, should be of such a size as would allow boarding outside the breakwater under all conditions of weather, and be able to make trips to Mariveles with supplies. The launch *Sanidad* at Cebu is also in poor condition. Nine thousand pesos were spent last year for repairs on the *Zapote* and *Sanidad*, and the same expense will continue in coming years. The quarantine service in the Philippines is, of course, a permanent institution, and so long as China, Indo-China, and India continue to be hotbeds of plague, smallpox, and other diseases, quarantine will be a necessity and the existing stations should be kept up to the highest degree of efficiency.

CAVITE AND OLONGAPO.

At Cavite and Olongapo the vessels of the United States Navy were permitted to enter and receive quarantine inspection. As these stations are not fully equipped it has been intended to send infected vessels to Mariveles. However, not a single infected vessel has arrived. In addition to their regular work, commissioned medical officers of the Navy performed the duties of quarantine officers at both ports. The statistics of the work for these ports for the fiscal year 1918 were as follows:

Cavite:

Vessels inspected.....	18
Crew inspected.....	1,270
Passengers inspected.....	8
Bills of health issued.....	12

Olongapo:

Vessels inspected.....	12
Crew inspected.....	1,491
Passengers inspected.....	270
Bills of health issued.....	10

CEBU QUARANTINE STATION.

At Cebu cases of cholera, small pox, and leprosy were found on board of some arriving vessels. The officers and other personnel of the station on duty aided much to improve the sanitary conditions of the city and Province of Cebu. Aid

was also given in the clinics of the Southern Islands Hospital. The transactions for the year at Cebu are partly shown by the following statistics:

Vessels inspected from United States ports	9
Vessels inspected from foreign ports	853
Vessels disinfected on account of diseases	5
Vessels in quarantine	5
Vessels fumigated	83
Crew inspected on arriving vessels	4, 317
Cabin passengers inspected on arriving vessels	34
Steerage passengers inspected on arriving vessels	93
Persons detained in quarantine under observation	148
Persons vaccinated at quarantine	87
Cases of cholera at quarantine station	6
Cases of smallpox at quarantine station	4
Seamen examined for licenses	32
Bills of health issued for vessels for foreign ports	61
Bills of health issued to vessels for United States	15
Interisland vessels inspected in port	137

ILOILO.

The officers of the quarantine service at Iloilo were moved to the new custom-house. Due to lack of funds, a building for disinfection station could not be erected, so the vessels were only inspected at this station, and in cases of cholera and smallpox the necessary treatment was given as far as facilities permitted. It is very essential that steam disinfection facilities be available at Iloilo, and it is hoped that a building as a disinfection station will soon be erected. Negotiations made for acquiring one of the buildings on the abandoned military reservation at Fort San Pedro have so far been futile. Regular fumigation was, however, continued, vessels' crews vaccinated, and a rigid inspection of vessels while in port maintained. The quarantine statistics at Iloilo may be tabulated as follows:

Vessels inspected	24
Vessels disinfected and fumigated	157
Vessels in quarantine	2
Crew inspected	1, 059
Passengers inspected:	
Cabin	17
Steerage	49
Persons bathed and effects disinfected	272
Cases of quarantinable diseases detected	6
Bills of health issued	61
Sanitary inspection interisland vessels	242
Pieces of cargo certified	363, 241
Seamen examined for licenses	5

JOLO.

Being very near to foreign ports, where but little is known of the prevalence of quarantinable diseases and where sanitary measures are entirely absent, Jolo is undoubtedly in great need of quarantine inspection. During the past year epidemics were introduced at this port, which were a continuous menace to the Philippines. The quarantine work during last year was performed by the medical staff of the Jolo Hospital, this service paying the hospital the usual fees provided by law. The quarantine transactions for the year were as follows:

Vessels inspected	31
Crew inspected	1, 633
Passengers inspected:	
Cabin	104
Steerage	370
Bills of health issued	24

MANILA.

The quarantine work at Manila was conducted as usual. Infected vessels arrived nearly every month during the year. Owing to the short distance from foreign ports where quarantinable diseases prevailed, inspection at Manila had

to be carefully performed, which practice met with no opposition from steamship agents. The individual transactions may be partially comprehended by the operations embraced by the following statistics:

Vessels inspected from United States ports.....	90
Vessels inspected from foreign ports.....	441
Vessels disinfected on account of disease.....	14
Vessels disinfected and fumigated.....	150
Vessels given sanitary inspection in port.....	106
Crew inspected on arriving vessels.....	47, 194
Cabin passengers inspected on arriving vessels.....	10, 985
Steerage passengers inspected on arriving vessels.....	28, 102
Persons vaccinated at quarantine.....	17, 517
Applicants for marine licenses examined.....	345
Stool examinations made for hookworm.....	2, 579
Bills of health issued for United States ports.....	179
Bills of health issued for foreign ports.....	415

MARIVELES QUARANTINE STATION.

As war measure, the practice of granting pratique to vessels at Mariveles was discontinued, and all vessels required to secure their pratique at Manila or other ports, according to destination. This proved to be satisfactory to all concerned, particularly the custom service. Most of disinfection and fumigation work was performed at other ports. Vessels transporting lepers to Culion were, however, disinfected and cleaned as usual. General sanitary improvements were made, such as the installation of a public laundry and toilets and the opening of a free dispensary for the poor inhabitants of Bataan adjacent to the quarantine station. Efforts to stamp out malaria were continued, and the whole population of about 2,500 in number were vaccinated.

A survey was made of the mountain canyon, the source of the water supply of the quarantine station, and of the town of Mariveles, and it is intended to reserve this watershed from settlement or use. Such reservation will not work hardship to anyone, as the land is neither occupied nor privately owned. A portion of the operations of the station at Mariveles is shown as follows:

Vessels at the station for treatment.....	4
Crew bathed and effects disinfected.....	201
Persons vaccinated.....	2, 500
Vessels disinfected.....	4

ZAMBOANGA.

Zamboanga has increased in importance, due to the regular call of large liners in addition to the small coasting vessels between Borneo, the adjacent islands, and the Straits Settlements. Statistics of the work during the year at Zamboanga have been tabulated as follows:

Vessels inspected.....	47
Crews inspected.....	2, 848
Passengers inspected:	
Cabin.....	761
Steerage.....	1, 912
Bills of health issued.....	40

PRIVATE SCHOOLS.

On July 16, 1918, Mr. M. H. O'Malley, the superintendent of private schools, resigned, and Mr. T. J. McQuaide, the assistant superintendent, assumed charge of private schools and was later appointed to succeed Mr. O'Malley.

The most notable and marked feature of the year's work of the private schools has been the large attendance and the increased number of schools that have received Government recognition. So great has been the enrollment that certain schools, particularly those located in the city, have refused many applications for admission, and in other schools a great number have been placed on the waiting list. The total number of schools reached 255, of which 127 are primary schools, 76 intermediate schools, 34 high schools, 17 colleges, and 1 commercial school.

The courses of study have undergone no important changes. With the exception of geography and music, no new texts have been introduced. Greater emphasis has been placed on conversational English and the discussion of current events. The latter subject has been given a definite place on the program, and it is the belief of the private school authorities that the reading of magazines, periodicals, and other informative literature will occupy no small part of the students' time.

Industrial education, on the whole, has been carried on along the same lines as in previous years. Greater interest has been noted in the girls' pay schools, although in the schools and colleges for boys, industrial instruction has not attracted so much interest as compared with the enthusiasm demonstrated by the other sex. The explanation can be found in the fact that the greater part of the students of the boys' pay schools come from families of the wealthy class. The reverse is true, however, in the public schools. Here, the industrial schedule is carefully made out, and the articles turned out are sold in the open market, and the producer receives a share of the profits realized. In lace making the school children, especially those attending the schools run by the Belgian Sisters, hold their own. These Sisters are deserving of all credit for the excellent work they are doing, and every encouragement should be offered them to assist them in their noble undertaking. Furthermore, the children are taught to make their own clothes and every encouragement has been given them to bank their earnings, thus making twofold the benefit derived from their work. Gardening still continues where ground is available.

Physical education in the form of athletic games and military drills, as in previous years, has occupied a considerable part in the school work. It is to be hoped that steps will be taken to further develop physical exercises in the private schools.

One of the greatest problems that have occupied the attention of the office of the private schools has been the matter of transfers. Under the provisions of existing law, students from recognized private schools are given the privilege of transferring to the public schools and in the grade to which their credentials entitle them without subjecting themselves further to entrance examinations, and likewise public-school pupils enjoyed the like privilege of transferring to private schools. This arrangement has for some time been used in the proper way, but as time went on it began to be abused, and many cases have arisen in which students from public schools were admitted to private schools and enrolled in grades higher than that to which their cards entitled them. The private-school officials, upon learning of these irregularities, have set up a series of rules governing transfers and enjoined the directors of schools to adhere to them. It is the belief of this department that closer supervision in this matter and cooperation among the authorities concerned will ultimately result in a stricter observance of the rules and in doing away with the practice mentioned.

The same problem which is constantly presented to the public-school administration in the matter of securing the services of good teachers also confronts the private school authorities. The need has been even more pressing, as the public schools could depend upon their own schools for preparing teachers whereas the private schools do not have such advantage. Most of the members of the faculty, especially those of the night schools, are either persons whose time during the day is devoted to their respective occupations or are recruits from advanced students of some institutions. Such material, of course, could not be expected to render the best of service. There are, however, a few schools that have teachers whose experience and training are above the average. To meet the situation described above, it has been the aim of the office of the private schools to encourage the establishment of normal institutes similar to those run by the bureau of education. This step has already been taken, and during the period covering this report two normal institutes have been established—one in Tagudin, Mountain Province, and the other in Manila. This number is insufficient to meet the needs of the situation, but it is a right beginning and bright prospects are expected in the future.

Another great obstacle to the progress of the private schools is the low salaries paid to the teachers. With very few exceptions, teachers of private institutions, especially the Catholic schools, receive salaries very inadequate for their work. This is due, in some respects, to the fact that the revenue derived from tuition fees is very small. In the larger schools of Manila, however, the instructors receive reasonable compensation.

One marked difference between the private schools and the public schools is noted in the number and size of school libraries. The bureau of education has

spared no means to attach at least one library to each of its schools, and plans are underway to establish traveling libraries for the benefit of the students and teachers. With very few exceptions, the libraries of the private schools are far from being satisfactory, and more attention should be given to this essential part of school work.

This department is especially pleased to make of record the patriotic services rendered by the children of the private schools in the Red Cross and Liberty loan campaigns conducted during the year. In Manila, as well as in the Provinces, it was largely through the participation of the school children and the teachers that made these drives successful. Liberty bonds were voluntarily purchased and money contributions liberally given. Parades, entertainments, and other forms of social functions were organized, and in these activities the pupils and teachers have voluntarily and patriotically offered their services and what little earnings they had. The sacrifice is indeed worthy of high praise.

STATISTICAL INFORMATION.

Many elaborate tables are attached to the inclosed reports of the director of education, the acting director of health, the chief quarantine officer, and the superintendent of private schools, to which reference is made for a fuller knowledge of facts and details.

Respectfully submitted.

CHARLES E. YEATER,
Secretary of Public Instruction.

REPORT OF THE SECRETARY OF FINANCE.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF FINANCE,

Manila, June 11, 1919.

SIR: I have the honor to submit the following annual report of the department of finance, corresponding to the year ending December 31, 1918.

The general economic conditions of the country have been excellent during the year. The trade balance from 1899 to the end of 1915 was against the Philippines in the amount of ₱37,621,183, but after said period our foreign commerce has given us constantly greater favorable trade balances. In 1918 the net trade balance in favor of the islands was ₱73,190,541, the greatest known in the history of the country, which balance, added to the favorable trade balances of 1916 and 1917, gives a total of ₱144,065,600 in the lapse of three years, or a net balance in favor of the Philippines of ₱106,444,417 during the 20 years of American administration. With the possible exception of the sugar-producing regions, prosperity was prevalent throughout the country during the year. The marvelous development of the trade of the islands, in which the definition of the political status as stated in the Jones law was a powerful factor, attracted American and foreign capital, and Filipino capital, which had been known heretofore for its extreme conservatism, was encouraged to undertake decidedly commercial, industrial, and agricultural pursuits.

The finances of the Government could not have been in a more flourishing state, as shown by the following statement of annual income and expenditures corresponding to a period of 10 years.

	Balance.	Income.	Expenditures.
1909.....	₱14,136,927.29	₱23,095,099.07	₱24,874,593.70
1910.....	12,357,432.66	27,243,504.50	25,592,368.93
1911.....	14,008,568.23	31,677,266.12	28,605,721.41
1912.....	17,180,112.94	31,247,673.39	31,461,746.81
1913.....	16,966,039.52	26,979,400.64	29,553,342.34
1913.....	¹ 14,392,097.82	11,567,878.28	15,790,776.12
1914.....	10,169,199.98	23,706,500.86	25,316,472.49
1915.....	8,559,228.35	29,558,626.45	27,883,738.03
1916.....	10,234,116.77	45,704,855.69	40,906,813.13
1917.....	15,032,159.33	54,781,241.44	45,408,717.74
1918.....	24,404,683.03	68,690,105.13	57,496,043.63

¹ Period of six months only, from July 1 to Dec. 31, on account of change in fiscal year.

The income has increased from ₱23,095,099.07 in 1909 to ₱68,690,105.13 in 1918, the estimate for 1919 being ₱70,957,757. The great increases began in 1916 simultaneously with the big trade balances in favor of the Philippines.

A comparison of the actual income and expenditures during the last two years is shown in the following statement:

Consolidated statement of income and expenditures for 1918 and 1917.

Items.	Fiscal year 1918.	Fiscal year 1917.
Income:		
Revenue from taxation.....	₱44,559,229.56	₱35,448,412.30
Import duties.....	13,479,736.56	11,183,822.41
Excise tax.....	13,191,923.35	12,933,425.77
Licenses and business tax.....	14,841,813.69	10,454,013.71
Wharfage tax.....	1,305,477.59	1,137,622.26
Franchise tax.....	1,026,509.04	782,675.49

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Consolidated statement of income and expenditures for 1918 and 1917—Contd.

Items.	Fiscal year 1918.	Fiscal year 1917.
Income—Continued.		
Revenue from taxation—Continued		
Documentary tax.....	₱847,037.52	₱682,692.29
Income tax.....	2,550,149.20	1,178,003.70
Immigration tax.....	207,752.00	152,232.00
Tonnage dues.....	157,756.42	152,670.49
Inheritance tax.....	75,127.74	5,284.93
Apportionment of internal revenue to local government.....	(3,164,033.55)	(3,164,033.55)
Incidental revenue.....	3,163,181.53	2,296,270.32
Revenue from public forests.....	588,984.98	487,665.04
United States internal revenue.....	1,919,753.11	1,253,851.23
Fines and forfeitures.....	546,224.85	419,672.49
Sales and rentals of public domain.....	103,423.13	70,957.64
Other.....	4,795.46	64,123.92
Earnings and other credits.....	20,888,353.84	16,855,156.96
Operating revenue of commercial and industrial units.....	15,372,531.91	11,832,021.62
Other income of operating units.....	62,301.51	52,626.02
Dividends on bank stock.....	495,589.53	314,786.78
Income from U. S. A. T. freight service.....	.....	337,470.62
Income incidental to functional activities.....	3,319,138.16	2,710,641.22
Sales of fixed property.....	113,494.89	81,641.88
Sales of friar lands real estate.....	850,056.26	570,822.19
Sales of San Lazaro real estate.....	214,299.52	229,246.63
Proceeds of loan from currency reserve fund.....	.....	425,000.00
Sales of agricultural bank loans.....	164,140.00	.....
Interest repayments, railway companies.....	290,202.06	.....
Credit adjustments—prior year.....	79,340.20	181,401.86
Accounts payable adjustments.....	46,277.13	73,422.27
Inventory adjustments (sales stock).....	27,629.29	59,863.11
Expired money orders (sec. 1973, Administrative Code).....	5,433.78	19,437.10
Pension fund reversions.....	.....	8,447.07
Receipts applicable to prior year.....	.....	20,182.31
Total income.....	68,690,105.13	54,781,241.44
Expenditures:		
Revenue service.....	13,030,950.39	9,063,829.24
Expense of revenue collection.....	1,271,918.98	1,151,680.26
Operating expense of commercial and industrial units.....	11,779,031.41	7,912,148.98
Debt service.....	2,247,165.73	2,167,062.11
Interest on public debt.....	1,297,226.00	1,289,822.62
Payments to sinking funds.....	834,939.73	855,639.49
Repayment of loans.....	65,000.00	22,500.00
General welfare service.....	34,761,539.11	29,437,890.53
Executive direction and control.....	1,098,269.98	1,133,300.64
Legislation.....	1,010,659.82	980,428.32
Adjudication.....	1,529,840.46	1,517,048.10
National defense.....	2,624,108.36	598,578.31
Law and order.....	3,660,256.09	3,729,336.45
Public health.....	2,828,018.39	2,114,650.46
Suppression of animal diseases and plant pests.....	632,515.30	721,564.98
Protection against forces majeures.....	162,980.47	160,817.73
Regulation of public utilities.....	37,674.84	44,401.76
Other protective service.....	96,707.39	78,699.06
Public education.....	4,406,860.50	4,372,457.76
Public corrections.....	909,283.72	857,793.55
Public charities.....	145,980.98	206,874.49
Other social improvement.....	32,127.59	.....
Conservation of natural resources.....	329,205.20	278,736.95
Development of commerce.....	2,241,658.88	1,696,173.63
Development of agriculture.....	2,149,627.74	1,719,692.37
Philippine publicity.....	12,065.88	1,730.55
Development of industrial arts and sciences.....	187,906.36	190,382.26
Other economic development.....	474,803.67	155,491.03
Aid to local governments.....	9,994,047.49	8,879,812.13
Outlays and investments.....	6,641,943.08	3,992,291.45
Purchase and construction of public works.....	1,698,314.05	1,040,830.49
Purchase and construction of equipment.....	1,005,766.99	723,457.32
Corporate investments.....	3,253,942.04	1,494,328.68
Advances to railway companies under guaranty contracts.....	683,920.00	733,674.96

Consolidated statement of income and expenditures for 1918 and 1917—Contd.

Items.	Fiscal year 1918.	Fiscal year 1917.
Expenditures—Continued.		
Extraordinary charges.....	₱785,903.66	₱584,353.28
Retirement gratuities, Act 2589.....	785,903.66	584,353.28
Debit adjustment—prior year.....	5,541.66	162,391.13
Mindanao and Sulu colonies.....		112,101.01
Accounts receivable written off.....		28,926.56
Cancellation of insurance claims.....		1,286.42
Prior year charges.....	5,541.66	20,077.14
Total expenditures.....	57,496,043.63	45,408,717.74
Increase in current surplus for the year.....	11,194,061.50	9,372,523.70
Add—current surplus at the beginning of the year.....	24,404,683.03	15,032,159.33
Current surplus at the end of the year (see balance sheet).....	35,598,744.53	24,404,683.03

The principal increases in the income were due to import duties, excise taxes, and to license and business taxes, brought about by the greater volume of trade and by the high prices of goods, which condition influenced the collections under percentage taxes; to the income tax as a result of the general prosperity and the greater efficiency of the inspection service; to United States internal revenue resulting from the greater exportation of cigars and cigarettes; to the commercial and industrial activities of the Government; and to income incidental to the workings of the Government on account of the rise in prices, as well as of the greater impulse given to the activities of governmental institutions.

In the expenditures the main increases are found in the operating expenses of the commercial and industrial activities of the Government, and expenses for national defense, public health, the development of commerce, agriculture and other economic pursuits, aid to local governments, public works, and corporate investments. The operating expenses of the commercial and industrial activities are offset by greater income and are due, as stated, to the higher prices of goods and to increased wages; the national defense includes the training of the National Guard; the development of agriculture, commerce, and other economic pursuits includes the food campaign, irrigation, and other activities of the bureaus of agriculture, commerce, and industry, and science; aid to local governments represents the funds allotted by the insular government to local governments for schools, public health, and roads, in the same manner that the expenditures for public works and equipment include all the works and equipment for general purposes, for schools, and public health incurred by the insular government. Taking into consideration the expenses for schools and public health included in the aid to local governments, public works, and equipment, the total expenditures made during 1918 for public instruction was ₱7,163,337.63, which is 12.5 per cent of the total expenditures of the Government for the year and 20.6 per cent of the expenses for general-welfare service. In the same manner the total expenditures for public health during the year was ₱3,492,373.24, which constitutes 6.1 per cent of all the expenditures and 10 per cent of the expenditures for general-welfare service. The investments in corporations consisted principally in the purchase by the Government of stocks of the Philippine National Bank, ₱1,595,960; of the National Coal Co., ₱918,000; loan to the Manila Railroad Co., ₱700,000; and loans pertaining to the former Agricultural Bank transferred by the Philippine National Bank to the Government, ₱39,982.04.

At the close of the fiscal year 1918 there was a balance in the treasury of ₱35,598,744.53, of which ₱24,832,714.98 are unappropriated funds and ₱10,766,029.55 are appropriated funds.

In view of the satisfactory state of the treasury and of the after-war changes that are expected to occur in the economic condition of the world, the revision of the laws on tariff, internal revenue, and immigration has been postponed for future consideration. Future attention will also be given to the plan of prescribing new basis for the distribution of taxes between the insular, provincial, and municipal governments. A part of the taxes is apportioned according to population, and it is expected that the new census, which is being

taken now, will be a source of plentiful information to be used in the preparation of such an important measure.

The budget system, inaugurated in 1917, has been followed since then and upheld warmly by the administration. Every day its principles become more firmly rooted, and with legitimate pride the Government can boast itself of having introduced into the system of public finance of the country an improvement directed to greater clearness and publicity of the appropriations and to the best coordination of its activities. The recent constitution of the council of state has a special significance to the financial system. That institution is called upon to outline the financial policy of the country, and the fact that the presidents, the people's representatives of both legislative houses are members of said body gives assurance as to the permanent soundness of the budget system.

The circulation at the end of the year 1918 reached ₱131,151,883, which, compared with ₱102,580,313 for the previous year, gives an increase of ₱28,571,570 in a year, and compared with ₱51,284,906 for 1915, gives an increase of ₱79,866,977 in three years. Based on the population as shown in the census of 1903, the circulation per capita was ₱17.36 on December 31, 1918, while on the same date of former years it was ₱13.44 in 1917, ₱8.58 in 1916, and ₱6.72 in 1915.

The currency reserve fund which guarantees the redemption of treasury certificates and the parity of Philippine currency reached on December 31 the sum of ₱112,549,208.73. Act No. 2776 on currency fixes the minimum of said fund at the amount of certificates of the treasury in circulation or available for circulation plus 15 per cent of the coins in circulation and in the treasury. Pursuant to this provision the minimum of the fund on December 31 was ₱102,824,160.64, the excess of this minimum being transferable to the general funds at the discretion of the secretary of finance. However, the undersigned, expecting that a reaction might cause great demand for exchange, has deemed it advisable to preserve untouched the entire reserve fund then existing without taking any action on the excess over the minimum fixed by law, especially when ₱10,261,526 of said fund are improperly invested in long-term loans to the Manila Railroad Co. and to the insular, provincial, and municipal governments.

In February, 1919, the legislature passed Act No. 2737, creating the mint of the Philippines and appropriating for said purpose the amount of ₱100,000. In the appropriation act for 1919, ₱250,000 more were set aside for the same object. The machinery has already been contracted for, as well as the services of an expert for its installation and for the organization of this new branch of the service. It is expected that the mint will begin its operations toward the latter part of 1919, meeting thereby a long-felt necessity and remedying the difficulties encountered in providing the country with the necessary coins.

The work performed by the different bureaus under the jurisdiction of the department of finance is shown below:

BUREAU OF THE TREASURY.

GENERAL TREASURY CASH ACCOUNT.

The following statement shows the movement of funds in the Insular Treasury during the fiscal year 1917:

General treasury funds:

Balance on hand Dec.

31, 1917----- ₱16,699,844.21

Receipts—

Cash deposits----- 108,172,803.55

Currency ex-
changes, Jan. 1
to Aug. 15, 1918. 35,892,162.60

Total ----- ₱160,764,810.36

Expenditures—

Cash withdrawals. 100,623,717.58

Currency ex-
changes, Jan. 1
to Aug. 15, 1918. 35,892,162.60

General treasury funds—
Continued.

Expenditures—Contd.

Amount of gold
standard fund
transferred to
currency reserve
fund, Aug. 15,
1918 ----- ₱3, 039, 992. 03

Total ----- ₱139, 555, 872. 21

Balance on hand Dec. 31, 1918----- ₱21, 208, 938. 15

Depository funds:

Balance on hand Dec.
31, 1917----- 25, 986, 046. 59

Deposits—

Treasurer of
United States--- 70, 815, 870. 58
United States dis-
bursing officers_ 82, 524, 731. 12
Insular disbursing
officers ----- 106, 288, 516. 29

Total ----- 285, 115, 164. 58

Withdrawals—

Treasurer of
United States__ 65, 805, 665. 04
United States dis-
bursing officers_ 79, 484, 901. 77
Insular disbursing
officers ----- 86, 772, 020. 30
Philippine Na-
tional Bank re-
demption fund_ 2, 000, 000. 00

Total ----- 234, 062, 587. 11

Balance on hand Dec. 31, 1918----- 51, 052, 577. 47

Silver certificate reserve
fund:

Balance on hand Dec.
31, 1917 ----- 70, 137, 150. 00
Certificates issued Jan.
1, to Aug. 15, 1918-- 61, 000, 000. 00

Total ----- 131, 137, 150. 00

Certificates retired

Jan. 1 to Aug. 15,
1918 ----- 42, 027, 900. 00

Balance on hand Aug.
15, 1918, transferred
to currency reserve
fund ----- 89, 109, 250. 00

Total ----- 131, 137, 150. 00

Currency reserve fund:

Balance transferred
from gold standard
fund Aug. 15, 1918-- 3, 039, 992. 03

Balance transfer red
from silver certifi-
cate reserve fund,
Aug. 15, 1918----- 89, 109, 250. 00

Receipts—

Cash deposits Aug.
16 to Dec. 31,
1918 ----- 1, 851, 460. 36

Currency reserve fund—
Continued.

Receipts—Continued.

Currency ex- changes, Aug. 16 to Dec. 31, 1918	₱35, 769, 605. 00
Certificates issued, Aug. 16 to Dec. 31, 1918	12, 680, 000. 00

Total ₱142, 450, 316. 39

Expenditures—

Cash withdrawals, Aug. 16 to Dec. 31, 1918	813, 690. 07
Currency ex- changes, Aug. 16 to Dec. 31, 1918	35, 769, 605. 00
Certificates re- tired, Aug. 16 to Dec. 31, 1918	4, 774, 954. 00

Total 41, 358, 249. 07

Balance on hand Dec. 31, 1918 ₱101, 092, 067. 32

Total funds for which the insular treasurer was
accountable on Dec. 31, 1918 173, 353, 582. 94

This balance of ₱173,353,582.94 was distributed as follows:

Distribution of funds.

	United States currency.	Philippine currency.	Philippine currency.
In treasury vaults	\$1, 070, 590. 46	₱14, 399, 442. 39	₱16, 540, 623. 31
On deposit with local banks:			
On open account		60, 846, 586. 01	60, 846, 586. 01
On time deposit		3, 888, 669. 94	3, 888, 669. 94
On deposit with authorized depositories in the United States	46, 038, 851. 84		92, 077, 703. 68
Total	47, 109, 442. 30	79, 134, 698. 34	173, 353, 582. 94

The cash balances of the following accounts make up the "general treasury funds" balance of ₱21,208,938.15, as indicated in the following statement:

General fund	₱20, 691, 157. 11
Friar lands bonds sinking fund	151, 675. 58
Public works bonds sinking fund	49, 043. 51
Manila sewer and waterworks bonds sinking fund	240, 597. 59
Cebu waterworks bonds sinking fund	16, 875. 00
Manila R. R. purchase bonds sinking fund	1, 244. 22
Southern lines bonds sinking fund	4, 448. 00
Land title assurance fund	5, 560. 76
Property insurance fund	(2, 513. 05)
Fidelity bond premium fund	50, 849. 43
Total	21, 208, 938. 15

The "depository funds" balance of ₱51,052,577.47, as shown in the following statement, consists of the cash balances on hand December 31, 1918, in the following accounts:

Burnham memorial fund	₱4, 000. 00
Manila R. R. Co. (contract No. 4)	20. 00
Treasury overage account	261. 89

Antituberculosis Society.....	₱3,321.27
Trust fund, sec. 2, Act No. 1510, Manila Rwy. Co.....	188,212.60
Trust fund, sec. 1, Act No. 1592, Manila Rwy. Co.....	457.34
Trust fund, Act No. 2393, Silay Electric Light & Power Co.....	1,000.00
Cavite electric light franchise, sec. 2, Act No. 667.....	1,000.00
Philippine National Bank.....	37,652,787.18
Rizal Day fund, 1917.....	11.20
Insular disbursing officers.....	216,449.12
United States disbursing officers (Navy).....	2,142,981.29
Treasurer of the United States.....	5,277,031.56
United States disbursing officers (Army).....	5,060,423.76
United States disbursing officers (Coast and Geodetic Survey).....	4,613.00
United States disbursing officers (American consul).....	7.26
Philippine National Bank (redemption fund).....	500,000.00
Total.....	51,052,577.47

The silver certificate reserve fund was abolished on August 15, 1918, and its balance transferred to the currency reserve fund, pursuant to the provisions of Act No. 2776. The balance of ₱101,092,067.32 in the "currency reserve fund" consists of ₱9,014,363.64 held in the treasury and \$46,038,851.84 United States currency deposited with depositories in the United States.

The sum of ₱60,846,586.01, shown above under the heading "Distribution of funds" as on open account with local banks, represents the balance of current account with the Philippine National Bank and draws interest at the rate of 1 per cent per annum on daily balances.

The following statement shows the funds to which the time deposits of ₱3,888,669.94 pertain, and the banks that hold them, together with the rate of interest drawn:

Name of fund.	Name of bank.	Interest per annum.	Amount of deposit.
General fund.....	Philippine National Bank.....	<i>Per cent.</i>	
Do.....	do.....	3½	₱2,700,000.00
Fidelity deposits, sec. 1, Act No. 1592, and sec. 2, Act No. 1510.	do.....	1	1,000,000.00
Fidelity deposits, sec. 2, Act No. 1510.....	Hongkong and Shanghai Banking Corporation.	3½	4,107.39
Total.....			3,888,669.94

On December 31, 1918, there was on deposit with depositories of the Philippine Government in the United States the sum of \$46,038,851.84. This amount belongs to the currency reserve fund, and is distributed as follows:

	U. S. Currency.
Chase National Bank, New York City.....	\$1,353,548.84
Philippine National Bank, New York City.....	38,785,303.00
Mercantile Trust Co., St. Louis, Mo.....	850,000.00
Central Trust Co., Chicago, Ill.....	550,000.00
Seattle National Bank, Seattle, Wash.....	200,000.00
National Bank of Commerce, Seattle, Wash.....	250,000.00
Commercial National Bank, Washington, D. C.....	250,000.00
Continental Trust Co., Washington, D. C.....	200,000.00
National Shawmut Bank of Boston, Mass.....	800,000.00
Merchants National Bank, Boston, Mass.....	200,000.00
Mechanics and Metals National Bank, New York City.....	800,000.00
National Bank of Commerce, New York City.....	500,000.00
Anglo and London-Paris National Bank, San Francisco, Calif.....	1,000,000.00
First National Bank of Omaha, Omaha, Nebr.....	250,000.00
Central National Bank, Lincoln, Nebr.....	50,000.00
Total.....	46,038,851.84

Of the above deposits, \$39,638,851.84 draws interest at the rate of 2½ per cent and the balance 3 per cent.

SPECIAL FUNDS.

Land-title assurance fund.—This fund is provided for by Act No. 496, known as the land registration act, its purpose being to reimburse anyone who may lose title to property registered under the act. The net income during the year amounted to ₱26,716.56 and derived from percentage fees on lands registered and from interest and dividends from investments. No claims against the fund have yet been paid since the passage of the act. The amount of the fund at the close of the year was ₱194,609.54.

Property-insurance fund.—This fund was established for the insurance of Government property against destruction or damage resulting from an act of God. The income of the fund during the year was ₱30,599.37, and derived from premiums and interest on investment, while the losses paid amounted to ₱275,493.18, or a net loss to the fund of ₱244,893.81. This large loss is due to the burning of the supplies, materials, and bodega belonging to the constabulary in the Oriente Building in the fire that took place on July 24, 1918. The fund paid for this loss the sum of ₱262,051.47. The fund had no balance on December 31, 1918.

Fidelity-bond premium fund.—This was created for the insurance of the fidelity of officers and employees of the Government and certain semigovernmental institutions. The rate of premium for the insurance in this fund has been fixed at one-half of 1 per cent per annum. The total amount of bonds in effect on December 31, 1918, was ₱17,754,715. The premiums collected during the year were ₱82,406.42 and the losses paid ₱21,668.03. Of this latter amount ₱21,269.50 pertained to 10 provincial and municipal employees and ₱398.53 to 2 insular employees. The amount of the fund at the close of the year was ₱100,000.

CURRENCY-RESERVE FUND.

The "gold-standard fund" and the "silver certificate reserve fund," which were established, the former for the maintenance of the parity of the Philippine silver peso with the theoretical gold peso, and the latter for the redemption of the silver certificates sold, have been superseded by the "currency-reserve fund." In pursuance of the provisions of Act No. 2776, made effective by the proclamation of the governor general, dated August 16, 1918, the gold-standard fund and silver certificate reserve fund were merged to constitute the currency-reserve fund. The functions of maintaining the parity of the Philippine currency and of redeeming the treasury certificates issued are, therefore, now devolved upon the currency-reserve fund. The balances of ₱14,496,789.46 of the gold-standard fund and ₱89,109,250 of the silver certificate reserve fund, totaling ₱103,606,039.46, were combined to form the currency-reserve fund. The transactions of the gold-standard fund, silver certificate reserve fund, and currency-reserve fund are regarded as pertaining to a single fund in this report.

The receipts of the fund during 1918 derived from interest on investments and bank deposits, premium on exchange, and other miscellaneous items amounted to ₱2,628,291.13, as against ₱1,806,957.47 in 1917. The increase of ₱821,333.66 was due chiefly to the greater amount of interest-bearing deposits with depositors in the United States supporting larger issue of treasury certificates. The receipts from premium on New York exchange, which was formerly a large source of income, has been very greatly reduced since the exchange operations between New York and Manila were conducted almost entirely by the Philippine National Bank. The exchange on New York sold during the year through the fund amounted to \$1,100,074.44, as compared with \$11,008,028.29 for 1914, \$11,010,730.51 for 1915, \$8,877,930.71 for 1916, and \$729,840.58 for 1917. During the year transfers of funds amounting to ₱30,480,000 were made to New York for United States Government purposes. These transfers were effected by credits furnished in Manila to the Treasurer of the United States in exchange for an equivalent amount placed by said official to the credit of the Philippine Government in United States currency in New York.

Telegraphic transfers and demand drafts in the sum of ₱2,367,675.38 were sold during 1918 by the insular treasurer's office on the provincial treasurers as compared with ₱2,748,038.19 for the preceding year. The premiums realized amounted to ₱5,926.70. The total amount of telegraphic transfers and demand drafts sold by provincial treasurers on the insular treasury aggregated ₱1,167,312.37, as against ₱902,422.38 for the preceding year.

The total expenses from the fund amounted to ₱567,199.22, as compared with ₱258,847.35 for 1917. The increment of ₱308,351.87 is due largely to the increase in circulation which required the printing of a large quantity of treasury certificates and the coinage of large amounts of subsidiary and minor coins.

The total expense during the year for printing currency was ₱163,465.67 and that for coinage ₱395,585.65.

During the year treasury certificates amounting to ₱73,680,000 were issued, and ₱46,802,854 retired, resulting in a net additional issue of ₱26,877,146, as compared with ₱36,990,000 issued and ₱9,602,850 retired, or a net additional issue of ₱27,387,150 for 1917.

Under the provisions of Act No. 2776, the currency reserve fund shall not at any time be less in amount than the nominal value of the treasury certificates in circulation and available therefor, plus 15 per cent of the money of the Government of the Philippine Islands in circulation and available therefor, exclusive of the silver certificates in circulation protected by gold reserve. The minimum of the fund on December 31, 1918, will, therefore, be as follows:

Nominal value of treasury certificates in circulation and available therefor-----	₱97, 014, 296. 00
15 per cent of the money of the Philippine Islands in circulation and available therefor, exclusive of the treasury certificates in circulation protected by gold reserve (the total silver and minor coins in circulation, in treasury vaults, and in United States Mint being ₱38,732,430.92)-----	5, 809, 864. 64

Total-----	102, 824, 160. 64
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The amount of the fund on December 31, 1918, was ₱112,549,208.73, as per the following:

Assets:

Investments-----	₱10, 261, 526. 00
Due from United States Mint-----	778, 113. 96
Accrued interest receivable-----	417, 736. 42
Accounts receivable-----	164. 30
Cash-----	101, 092, 067. 32

	112, 549, 608. 00
Less outstanding warrants-----	370. 03

Total-----	112, 549, 237. 97
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Liabilities:

Accounts payable-----	29. 24
Balance-----	112, 549, 208. 73

Total-----	112, 549, 237. 97
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The cash balance shown above is composed of the following items:

In treasury vaults-----	₱9, 014, 363. 64
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With depositories in United States:

Chase National Bank, New York-----	\$1, 353, 548. 84
Philippine National Bank, New York-----	38, 785, 303. 00
National Bank of Commerce, New York City-----	500, 000. 00
Mercantile Trust Co., St. Louis, Mo-----	850, 000. 00
Central Trust Co. of Illinois, Chicago-----	550, 000. 00
National Shawmut Bank, of Boston, Mass-----	800, 000. 00
Continental Trust Co., Washington, D. C-----	200, 000. 00
Merchants National Bank, Boston, Mass-----	200, 000. 00
Mechanics & Metals National Bank, New York City-----	800, 000. 00
National Bank of Commerce, Seattle, Wash-----	250, 000. 00
Commercial National Bank, Washington, D. C-----	250, 000. 00
Anglo-London-Paris National Bank, San Francisco, Calif-----	1, 000, 000. 00
Seattle National Bank, Seattle, Wash-----	200, 000. 00
First National Bank of Omaha, Nebr-----	250, 000. 00
Central National Bank, Lincoln, Nebr-----	50, 000. 00

46, 038, 851. 84	92, 077, 703. 68
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101, 092, 067. 32

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Deducting from ₱112,549,208.73 the sum of ₱102,824,160.64, the minimum of the fund as stated above, there was a balance of ₱9,727,048.09, which represents the excess over the minimum of the fund.

BONDED INDEBTEDNESS.

All the bonded indebtedness of the Government of the Philippine Islands consist of 10-30 years 4 per cent gold bonds, distributed as follows:

Issue.	Date of maturity.	Amount.
Friar lands bonds	Feb. 1, 1934	₱14,000,000
Public works bonds:		
First issue	Mar. 1, 1935	5,000,000
Second issue	Feb. 1, 1936	2,000,000
Third issue	Aug. 31, 1939	3,000,000
Manila sewer and waterworks bonds:		
First issue	June 1, 1935	2,000,000
Second issue	Jan. 2, 1937	4,000,000
Third issue	Jan. 2, 1938	2,000,000
Cebu waterworks bonds	Jan. 1, 1941	250,000
Manila railroad purchase bonds	Dec. 1, 1946	8,000,000
Total		40,250,000

Adequate legislation provides for sinking funds to redeem these bonds at maturity. The accretions of the sinking funds consist of the interest derived from investment and of the annual allotments from the insular government and the cities of Manila and Cebu, as the case may be. Except in the cases of Manila and Cebu waterworks, these sinking funds are adjusted annually so that the amount thereof on each anniversary of issue of the bonds equal an annuity of ₱19,371.33 for each ₱1,000,000 of bonds outstanding, together with interest at the rate of 3½ per cent per annum from the date of issue.

The amounts of the bond sinking funds at the close of the year were as follows:

Friar lands bond sinking fund	₱4,947,780.89
Public works bond sinking fund	2,801,334.13
Manila sewer and waterworks bond sinking fund	2,194,982.35
Cebu waterworks bond sinking fund	31,061.67
Railroad purchase bond sinking fund	316,285.07
Total	10,291,494.20

GUARANTY OF INTEREST ON BOND ISSUES OF RAILWAY CORPORATION.

Under the authority of an act of Congress approved February 6, 1905, the insular government guarantees 4 per cent interest for a period not to exceed 30 years on the first-lien bonds issued by the Philippine Railway Co. for the construction of certain lines in the islands of Panay and Cebu and by the Manila Railroad Co. for the construction of the southern lines in the island of Luzon.

On December 31, 1918, the combined issues of both companies outstanding totaled \$22,263,000 United States currency, and the net balance of the sums advanced by the Government under the above guaranty was ₱5,976,958.33.

INVESTMENTS.

The following statement shows the status of investments on December 31, 1918, made from different funds under the control of the insular treasurer:

Title of accounts and funds:

General fund	₱7,262,720.00
Currency reserve fund, Act No. 2776	10,261,526.00
Manila sewer and waterworks bonds sinking fund, Act No. 1323	1,934,927.50
Public-works bonds sinking fund, Act No. 2425	2,738,360.00

Title of accounts and funds—Continued.

Friar lands bonds sinking fund, Acts Nos. 1749, 2550, and 2592-----	₱4,781,665.00
Cebu waterworks bonds sinking fund, Act No. 2009-----	14,000.00
Manila railroad purchase bonds sinking fund, Act No. 2625--	312,080.00
Land title assurance fund, Act No. 496-----	188,009.00
Property insurance fund, sections 336 to 341, Act No. 2711---	2,500.00
Fidelity bond premium funds, secs. 313 to 335, Act No. 2711--	45,000.00
Purchase of the Manila R. R. Co. stock, Act No. 2574-----	8,000,000.00
Total -----	35,535,787.50

CIRCULATION.

The money in circulation on December 31, 1918, amounted to ₱131,151,883.03, as compared with ₱102,580,313.57, the circulation on December 31, 1917, or an increase during the year of 1918 of ₱28,571,569.46.

The circulation of the islands on December 31, 1918, consisted of the following :

Treasury certificates-----	₱95,112,523.00
Silver and minor coinage-----	25,669,147.88
Notes, Bank of the Philippine Islands-----	5,962,852.50
Notes, Philippine National Bank-----	4,407,359.65
Total circulation-----	131,151,883.03

Based on the population of the Philippine Islands of 7,635,426, per census of 1903, the per capita circulation on December 31, 1918, would be ₱17.36.

BANKS AND BANKING.

Article 8, chapter 41, of Act No. 2711, places the supervision of banking institutions and building and loan associations under the jurisdiction of the insular treasurer.

On December 31, 1918, there were in operation in the Philippine Islands the following banks and building and loan associations :

DOMESTIC.

Philippine National Bank, Manila, with branches at Aparri, Bacolod, Cebu, Corregidor, Davao, Iloilo, Kabanatuan, P. I., and New York, N. Y.

Bank of the Philippine Islands, Manila, with branches at Iloilo and Zamboanga.

Pangasinan Bank, Dagupan.

Monte de Piedad and Savings Bank, Manila.

The Philippine Trust Co., Manila.

Postal Savings Bank, Manila.

El Hogar Filipino, Manila.

Manila Building and Loan Association, Manila.

Zamboanga Building and Loan Association, Zamboanga.

FOREIGN.

International Banking Corporation, branch at Manila, with subagency at Cebu.

Hongkong and Shanghai Banking Corporation, branch at Manila, with subagency at Iloilo.

Chartered Bank of India, Australia, and China, branch at Manila, with subagencies at Cebu and Iloilo.

The Yokohama Specie Bank, branch at Manila.

The great prosperity and business activity attained by the islands are reflected in the large resources of the banks, which on December 31, 1918, reached the amount of ₱399,807,941, as compared with ₱239,247,726 on December 31, 1917; ₱121,954,154 on December 31, 1916; ₱71,542,868 on December 31, 1915; and ₱66,639,866 on December 31, 1914.

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The following is a comparative consolidated statement of the resources and liabilities of all banks and trust companies in operation in the islands at the close of business on December 31 for the years 1917 and 1918:

	Dec. 31.		Increase.
	1917	1918	
RESOURCES.			
Loans and discounts.....	₱52,871,372.23	₱73,565,065.69	₱20,693,693.46
Overdrafts.....	30,535,890.84	64,110,967.58	33,575,076.74
Due from other banks, head office, branches, and agents.....	86,349,011.52	107,246,295.27	20,897,283.75
Cash on hand and other cash items.....	12,598,119.89	19,255,720.73	6,657,600.84
Other resources.....	56,893,331.96	135,629,892.71	78,736,560.75
Total.....	239,247,726.44	399,807,941.98	160,560,215.54
LIABILITIES.			
Capital stock.....	12,568,765.80	14,955,358.99	2,386,593.19
Reserve fund.....	4,121,763.66	5,826,836.38	1,705,072.72
Bank notes in circulation.....	10,137,357.50	10,370,212.15	232,854.65
Deposits.....	140,093,958.53	237,859,470.18	97,765,511.65
Due to other banks, head office, branches, and correspondents.....	47,545,230.42	71,894,801.57	24,349,571.15
Other liabilities.....	24,780,650.53	58,901,262.71	34,120,612.18
Total.....	239,247,726.44	399,807,941.98	160,560,215.54

THE GOVERNMENT AGRICULTURAL BANK.

As stated in the report for the preceding year, pursuant to the provisions of section 6 of Act No. 2612, all the current assets and liabilities of the agricultural bank were transferred as of May 2, 1916, to the Philippine National Bank except certain mortgage loans, which were not accepted by the latter. Of these loans, ₱160,440 as principal and ₱105,301.12 as interest were collected during 1918. The total of outstanding loans on December 31, 1918, was ₱532,816, and the interest accrued and unpaid up to December 31, 1917, amounted to ₱76,593.99. No computation of the interest up to December 31, 1918, has been made as yet.

INSURANCE.

During the year all German insurance companies in operation in the islands were liquidated by the alien-property custodian. The withdrawal of these companies did not cause any disturbance to commerce.

On December 31, 1918, there were 36 fire, 27 marine, 8 life, and 17 miscellaneous insurance companies doing business in the Philippine Islands.

A complete statistical statement showing the financial condition and operation of the insurance companies for 1918 was not available at the present writing, as the annual statements of said companies have not been received.

BUREAU OF CUSTOMS.

GENERAL TRADE CONDITIONS.

The following statement shows the value of imports and exports, total trade, and trade balance for each year from 1899 to 1918:

Year ended Dec. 31—	Imports.	Exports.	Total trade.	Balance of trade in favor (+) or against (-) the islands.
1899.....	₱38,385,972	₱29,693,164	₱68,079,136	₱— 8,692,808
1900.....	49,727,558	45,980,746	95,708,304	— 3,746,812
1901.....	60,324,942	49,006,706	109,331,648	—11,318,236
1902.....	66,684,332	57,343,808	124,028,140	—,934,524
1903.....	67,622,768	64,793,492	132,416,260	— 2,829,276
1904.....	59,155,462	58,299,000	117,454,462	— 856,462
1905.....	60,101,100	66,909,548	127,010,648	+ 6,808,448
1906.....	52,807,536	65,285,784	118,093,320	+12,478,248
1907.....	60,907,620	66,195,734	127,103,354	+ 5,288,114
1908.....	58,372,240	65,202,144	123,574,384	+ 6,829,904
1909.....	62,168,838	69,818,674	132,017,512	+ 7,679,836
1910.....	99,438,722	81,256,926	180,695,648	—18,181,796
1911.....	96,048,814	89,674,254	185,723,068	— 6,374,560
1912.....	123,335,802	109,846,600	233,182,402	—13,489,202
1913.....	106,625,572	95,545,912	202,171,484	—11,079,660
1914.....	97,177,306	97,379,268	194,556,574	+ 201,962
1915.....	98,624,367	107,626,008	206,250,375	+ 9,001,641
1916.....	90,992,675	139,874,365	230,867,040	+48,881,690
1917.....	131,594,061	191,208,613	322,802,674	+59,614,552
1918.....	197,198,423	270,388,964	467,587,387	+73,190,541

As will be noted from the foregoing, the total value of foreign trade for the year 1918, computed from the declared values of imports and exports, amounts to ₱467,587,387, a value larger than in any calendar year in the history of the islands, and is approximately 45 per cent greater than the preceding year. This reflects in a direct manner the wonderful development that has taken place in the external commerce of the islands notwithstanding the shortage of tonnage, the excessive freight rates, and the prohibition placed on exportation of a number of commodities.

It will also be noted from the above statement that, notwithstanding the unusually heavy importations of rice and manufactures of cotton, iron, and steel, the year 1918 closed with a trade balance of ₱73,190,541 in favor of the islands as against ₱59,614,552 for the preceding year.

The year was characterized by an exceptionally large increase recorded in the export of coconut oil, coincident with decreased export of copra, showing the rapid development of the oil industry in the islands, which may cause the export of copra to lose its importance in the future. Increase in the export of coconut oil was 177 per cent, while decrease in the export of copra was 37 per cent. The next higher increase in exports was that of tobacco products, followed by hemp and sugar. The total exports mark an increase of ₱79,180,351, or 41 per cent over the preceding year.

While exports for 1918 shows a considerable increase over those of 1917, imports likewise show a comparatively larger increase over those of 1917. Imports during the year under review show an increase of ₱65,604,362, or 50 per cent. The principal imports during the year according to their importance are cotton goods, iron and steel, and rice.

FOREIGN CARRYING TRADE.

A total of 652 vessels, with an aggregate net tonnage of 1,412,871 tons, entered the Philippine Islands from foreign ports during the year 1918, while vessels to the number of 659, representing a total net tonnage of 1,544,648 tons, were cleared for foreign ports. Compared with the previous year this is an increase in total entrances and clearances of 11 vessels with 46,427 tons.

The value of imported and exported merchandise carried under each of the principal flags shows increases for all flags, with the exception of the Dutch vessels, which show a considerable decrease. American vessels show the highest proportionate increase, Philippine vessels second, and Japanese vessels third. The nationalities of vessels by order of the trade value carried during the year were: American, ₱162,861,385; British, ₱120,999,888; Japanese, ₱107,698,080; Norwegian, ₱17,589,898; Philippine, ₱15,568,718; Danish,

₱13,078,701; and Dutch, Spanish, Chinese, Swedish, French, and others aggregating ₱29,790,717. In 1917, as well as in previous years, British vessels furnished space for the largest portion of our external trade, but in 1918 she was surpassed by American vessels and pushed down to second place on the list. In 1917 no Chinese, Danish, French, or Swedish vessels participated in carrying our imports or exports, but in 1918 they share the Philippine carrying trade to the aggregate amount of ₱20,000,000.

TRADE WITH THE UNITED STATES.

Trade with the United States during the past year, both in imports and exports, has increased tremendously as compared with previous years and is the highest on record. Imports amounted to ₱118,321,405 against ₱75,858,443 in 1917, an increase of ₱42,462,962, or 56 per cent, and exports amounted to ₱179,103,348 against ₱127,028,922 in 1917, an increase of ₱52,074,426, or 41 per cent. The imports from the United States were 60 per cent of the total imports from all countries, and the exports to the United States were 66 per cent of the total exports.

IMPORTS.

The year just closed has been one of unprecedented activity in the import trade. The total value of imports for the year 1917 was 45 per cent over that of 1916, but imports during 1918 were still larger, showing a 50 per cent increase over 1917. This remarkable increase during the past two years gives evidence of the continued development of our home market for foreign products and the increased purchasing power of the inhabitants of the Philippine Islands. The principal items which contributed to this increase in the order of their importance were: Cotton goods, iron and steel manufactures, rice, fish and fish products, automobiles, and wheat flour. Great increases are also noted in the importations of silk goods, chemicals, drugs, dyes, and medicine, meat products, books and other printed matter, coal and leather manufactures. Insignificant decreases, however, were registered in several items, such as dairy products, soap, cattle, and paper and the manufactures thereof.

As in the preceding year, United States ranked first among the countries furnishing our imports during 1918; Japan, second; French East Indies, third; China, fourth, and Australia, fifth. Imports from these countries show remarkable increases over those of 1917. United States registered an increase of 56 per cent; Japan, 59 per cent; French East Indies, 33 per cent; China, 54 per cent, and Australia, over 100 per cent. Slight increases are also noted in the importations from British East Indies, France, Siam, and Switzerland. Imports from the United Kingdom, Hongkong, Spain, Dutch East Indies, and Italy show considerable decreases, while imports from the central countries of Europe ceased altogether.

COTTON AND ITS MANUFACTURES.

In general the prices of cotton goods prevailing in 1918 were approximately 50 per cent higher than the prices that prevailed in 1917, but notwithstanding this drawback cotton imports during the year exceeded those of previous years both in quantity and in total value. The total value of cotton importations in 1918, which constitute more than one-fourth of the total imports, reached ₱58,016,844, as against ₱37,574,005 in 1917 and ₱18,649,772 in 1916. Imports from the United States, Japan, and China show material increases. The total value of imports from the United Kingdom increased considerably in comparison with the total value reached in 1917, but it is still much below prewar imports. Imports from France, Italy, Netherlands, and Spain show a substantial decline, while imports from the central countries of Europe have completely ceased.

IRON AND STEEL.

Imports of iron and steel and manufactures thereof during the year amounted in value to ₱24,507,970, as compared with ₱11,855,125 in 1917, or an increase of over 100 per cent. The prices of iron and steel products rose tremendously during 1918 as a result of the increased freight rates and the great difficulty experienced in the United States in securing shipping space for iron and steel

cargoes, and while the quantity imported increased considerably as compared with 1917 imports the high total value reached in 1918 is largely due to higher prices. Approximately 92 per cent of the total importations of these commodities came from the United States and 5 per cent from Japan. Imports from Japan show an increase of ₱597,215 over those of 1917, while imports from China likewise show a notable increase. Imports from the United Kingdom have suffered a gradual decline since the outbreak of the war. Imports from that country in 1913 amounted to ₱2,279,244, as compared with only ₱215,090 in 1918.

RICE.

Rice imports during the year, which represent 8.33 per cent of the total imports, show a substantial increase over those of the previous year both in the quantity imported and the total value. The average value per 100 kilos amounted to ₱8.94, as compared with ₱7.33 in 1917 and ₱6.87 in 1916. French East Indies again heads the list of countries furnishing our rice imports, of which approximately 84 per cent came from that country. Siam ranked second and contributed 14 per cent, which is equivalent to ₱2,305,333 in value, as compared with only ₱696,722 in 1917, and British East Indies third with a contribution of ₱397,118 as against ₱228 in 1917.

OTHER IMPORTS.

Automobiles.—Importations of automobiles and parts thereof, including tires, amounted to ₱6,525,065 as against ₱3,080,801 in 1917. Automobiles to the number of 1,911 were imported during the past year as compared with 1,237 in 1917 and 986 in 1916.

Silk and its manufactures.—The value of importations of silk and manufactures thereof totaled ₱5,727,024 as compared with ₱3,961,187 in 1917, and is the highest on record in the history of the islands.

Food products.—The total value of food products other than rice and cattle imported during the year amounted to ₱25,627,985 as compared with ₱17,608,865 in 1917. With the exception of rice, wheat flour was the food product of greatest value imported during the year, the total value thereof amounting to ₱6,033,528 as against ₱3,831,056 in 1917. Australasia furnished approximately 88 per cent of the total imports of wheat flour, amounting to ₱5,526,666 in value, which constitutes almost 75 per cent of the total import trade with that country. Imports of this commodity from Australasia in 1917 amounted to ₱2,425,003 only. Importations of fish and fish products show the highest proportionate increase, which amounted to ₱5,212,350 as compared with ₱1,855,736 in 1917. Considerable increases are also noted in the importations of breadstuffs other than flour, cocoa, eggs, fruits and nuts, meat products, and vegetables, while slight decreases are noted in the importations of coffee, dairy products, and sugar in comparison with 1917 importations.

Leather goods.—Leather and manufactures thereof amounting to ₱4,171,064 were imported in 1918 as compared with ₱3,247,817 in 1917.

Vegetable fibers and manufactures thereof.—Importations of commodities of this class amounted to ₱4,724,325 as against ₱3,071,808 in 1917 and ₱1,241,175 in 1916.

Coal.—The total value of coal importations for 1918 amounted to ₱4,662,349 as against ₱3,076,470 in 1917. The increase shown is wholly due to higher prices that prevailed during the year, as the quantity imported is considerably less than in 1917. Japan is the principal source of our coal supply, approximately 68 per cent of the total coal importations, amounting in value to ₱3,153,052, having come from that country as compared with ₱2,359,838 in 1917. China ranked second with a contribution amounting to ₱845,119 as compared with ₱292,457 in 1917, and British East Indies third, which furnished coal imports valued at ₱222,172 as against ₱109,259 in 1917.

EXPORTS.

The total value of exports during the past year shows an increase of 41 per cent over 1917. This increase is due both to an increase in the amounts of the various commodities exported as well as to higher prices received for same. Exports to the United States during 1918 show an increase of 41 per cent over those of 1917, and those to the United Kingdom 89 per cent. Considerable increases are also shown in the exportations to Japan, Spain, China, British East

Indies, and French East Indies, while slight declines are shown in the exportations to France, Hongkong, and Australasia. The principal articles of export during the year, according to their importance, were hemp, coconut oil, sugar, tobacco products, and copra.

Hemp.—The total quantity of hemp exported during the year shows a slight decline in comparison with the quantity exported during 1917, but exportations in 1918 are much greater in value than those of 1917. This indicates that exceptionally high prices were obtained for this product in foreign markets. Hemp exports valued at ₱65,468,402, which is 56 per cent of the total exports of this commodity during the year, went to the United States, as against ₱59,291,095 exported during 1917, an increase of ₱6,177,307. The most remarkable increase is shown in the exports to the United Kingdom. Hemp exports to that country reached ₱37,288,369 in value, as compared with only ₱18,980,263 in 1917, or an increase of almost 100 per cent. The average value per 1,000 kilos of hemp exported during 1918 amounted to ₱687.60, which is the highest on record.

Coconut oil.—Coconut oil is rapidly taking precedence over copra as an article of export. Exports of this commodity during the past year have shown such a tremendous increase that it is fair to assume that the coconut-oil industry is a permanent institution in the islands and will increase in importance with each succeeding year. Exports during 1918 amounted to ₱63,323,317, as compared with ₱22,818,294 in 1917 and ₱7,851,469 in 1916. The United States is practically the sole importer of this commodity in 1918, 98 per cent of the total exports having gone to that country and 2 per cent to Canada and Guam. This is due in a large measure to the prohibition placed by the War Trade Board on the exportation of coconut oil to foreign countries, which has since been abolished.

Sugar.—The total value of sugar exports during 1918 amounted to ₱31,608,780, as compared with ₱24,555,357 in 1917, and, with the exception of the year 1916, is the highest on record.

While higher prices were commanded by other Philippine products, both in the United States and in foreign markets, the average price of sugar exported in 1918, which amounted to ₱115.67 per 1,000 kilos, is below the average price for the year 1917. As usual, the principal markets for our sugar, according to their importance, are the United States, Hongkong, China, and Japan. Sugar amounting in value to ₱16,559,780, which is slightly over 52 per cent of the total sugar exports, went to the United States, while sugar valued at ₱6,631,536 was exported to Hongkong, ₱4,979,941 to China, and ₱3,320,735 to Japan.

Tobacco products.—Exports of tobacco products during 1918 have shown a very remarkable increase over those of 1917. The amount exported during the past year aggregated ₱27,150,626 in value, as compared with ₱14,301,081 in 1917, or an increase of nearly 90 per cent. The greatest increase is shown in cigars, the amount exported and the value realized therefrom being the highest on record. Cigars to the number of 359,664,827, valued at ₱14,233,437, were exported during the year, of which approximately 80 per cent went to the United States. The average value per 1,000 cigars obtained in 1918 is considerably higher than the average value obtained in 1917, and is the highest in the records of the country.

Copra.—Copra exports have shown a marked decline, and it is believed that in view of the rapid development that has taken place in the local coconut-oil industry, copra will gradually lose its importance as an article of export. Exports during the past year amounted to ₱10,377,029 in value, as against ₱16,654,301 in 1917. With the exception of a small shipment of copra samples to Japan, valued at ₱12, no shipment is recorded to any foreign country. All went to the United States. This is due to the embargo placed on the exportation of copra to foreign ports, which has since been rescinded.

Embroideries.—Exports of embroideries have shown a tendency to increase with each succeeding year since the outbreak of the war. This is probably due in a large measure to the inability of the European countries to supply the demands of the United States for this product owing to the conditions created by the war, which have practically paralyzed the activities in the manufacture of articles destined for export. The unusually great quantities of embroideries exported to the United States during the past three years seem to indicate that Philippine embroideries have attained a position in the United States markets, and it is fair to assume that they will continue to develop in the future, notwithstanding a possible resumption of the manufacture and export of embroideries from Europe incident to the establishment of peace. The value of embroideries exported during the past year aggregated ₱4,361,352, almost all of

which went to the United States, as compared with ₱3,929,318 in 1917, ₱2,328,024 in 1916, and ₱735,303 in 1915.

Ore and bullion.—The total amount of gold bullion exported was 65,918 ounces, valued at ₱1,873,938, as against 88,658 ounces, valued at ₱2,677,284, exported in 1917, showing a considerable decrease in the quantity and total value exported, and a slight decrease in the average value per ounce. Silver ore, valued at ₱28,000, was exported during the year, all of which went to the United States.

CUSTOMS COLLECTIONS.

The following statement shows the total collections of the Bureau of Customs, by sources, for the year 1918, as compared with the year 1917:

Sources.	1918	1917	Increase (+) or decrease (—).
Import duty.....	₱13,682,761.27	₱11,333,968.54	+ ₱2,348,792.73
Export duty ¹	4,795.46	2,121.02	+ 2,674.44
Wharfrage.....	1,311,657.35	1,144,397.32	+ 167,260.03
Fines and seizures.....	45,550.52	28,018.23	+ 17,532.29
Tonnage dues.....	157,812.05	152,708.27	+ 5,103.78
Storage.....	97,461.33	46,469.28	+ 50,992.05
Immigration dues.....	215,264.00	157,064.00	+ 58,200.00
Auction sales.....	2,829.82	3,531.51	— 701.69
Arrastre and piers collections.....	305,983.81	244,762.42	+ 61,221.39
Various other sources ²	388,492.40	319,498.97	+ 68,993.43
Trust fund.....	227,928.18	138,467.78	+ 89,460.40
Total.....	16,440,536.19	13,571,007.34	+ 2,869,528.85

¹ Collected on hemp reexported from the United States prior to Oct. 13, 1913.

² License fees for vessels included in this source.

Besides the total collections shown in the foregoing table, internal-revenue taxes to the amount of ₱2,144,564.31 were collected by this bureau in pursuance of the provisions of Act No. 2432, as amended by Act No. 2445. The amount collected in 1917 was ₱2,283,738.35.

INSPECTION OF VESSELS.

During the year inspections were made by the hull and boiler inspectors of 269 vessels, with an aggregate net tonnage of 44,024.40. Of the total number inspected, 11 were steamers of more than 1,500 tons; 22 steamers and 2 sailing vessels of less than 1,500 but more than 500 tons; 27 steamers and 11 sailing vessels of less than 500 but more than 300 tons; 36 steamers and 23 sailing vessels of less than 300 but more than 100 tons; 121 steamers and 16 sailing vessels of less than 100 tons. Twenty-four steam vessels were awaiting inspection at the close of the year. Reports were received of 76 vessels wrecked and lost during the year, and 19 vessels were placed out of commission. Admeasurements were made of 76 vessels.

MARINE OFFICERS.

The board of marine examiners examined 251 applicants for certificates of various grades, of which number 231 passed and 20 failed. The total number of marine officers holding unexpired certificates at the end of the year was 1,750, while 620 expired certificates are outstanding.

DOCUMENTATION AND LICENSING OF VESSELS.

During the year under review 42 steam vessels, with a total net tonnage of 7,049, and 300 sailing vessels, with a total net tonnage of 6,743, were newly documented in the coastwise trade, as compared with 16 steam vessels, with a net tonnage of 2,673, and 411 sailing vessels, with a net tonnage of 6,208, documented in 1917. In the bay and river business 229 vessels, with a net tonnage of 4,541, were newly documented in 1918, as compared with 109 vessels, with a net tonnage of 1,481, in 1917.

Coastwise licenses were issued during the year to 151 steam vessel, having a net tonnage of 28,464.84, and 711 sailing vessels, with a total net tonnage of

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27,570.10. Bay and river licenses were issued to 1,580 vessels, having a total net tonnage of 35,672.27. The number of vessels in commission during the year, therefore, amounted to 2,442, with a total net tonnage of 91,707.21.

IMMIGRATION AND EMIGRATION.

The total number of passengers arriving in the Philippine Islands during the past year was 21,668, as compared with 19,635 in 1917, and the total number departing was 17,710, as compared with 16,293 in 1917, not including enlisted men and others attached to the military or naval forces of the United States traveling as such. Of the total number of inward-bound passengers, 8,866 were immigrants, 7,622 being males and 1,244 females; while of the total number of departing passengers 885 were emigrants, showing a net gain to the islands of 7,891 in so far as actual settlers are concerned. The figures for the past year show a decided increase in the number of inward-bound passengers over those of 1917. This increase is accounted for by a relatively large increase in the number of Chinese immigrants coming to the Philippine Islands and seeking admission during the year, which may be attributed to the disturbed conditions that prevailed in China during the year caused by the internal wars that were going on between the different factions of the population. Chinese immigrants to the number of 4,999 were admitted during the year as compared with 3,094 admitted in 1917, or an increase of 61 per cent. During the year citizens of the United States to the number of 2,052 arrived and 3,011 departed, and citizens of the Philippine Islands to the number of 3,438 arrived and 3,967 departed. As usual, the Chinese again head the list of aliens arriving at and departing from Philippine ports during the year. The total number of Chinese admitted was 10,376, of whom 4,999 were immigrant aliens and 5,377 were returning residents. Japanese immigration showed a slight increase, the total number admitted being 3,965, of whom 3,559 were immigrant aliens and 406 were returning residents. Japanese to the number of 1,561 departed during the year. Spanish subjects to the number of 143 were admitted, of whom 67 were immigrant aliens and 76 were returning residents, while a total of 129 Spanish persons departed.

A total of 347 immigrants were debarred from admission during the year, and 72 aliens were deported from the islands under the provisions of the immigration and opium laws.

SECRET SERVICE.

During the past year the secret-service force of this bureau has been ably managed and recorded a most brilliant work. Numerous arrests were made for attempted violations of customs, immigration, and opium laws; large quantities of contraband merchandise were seized, and many attempts to evade the revenue laws were frustrated. A total of 332 cases were handled, of which number convictions were secured in 217 cases, 55 cases were dismissed, and 60 cases were still pending final action at the close of the year. The fines imposed in such cases amounted to ₱33,660. Opium amounting to 547 kilograms, with an approximate value of ₱1,094,204, was seized and confiscated during the past year.

ARRASTRE PLANT.

Owing to an unusual increase in importations during 1918 as compared with those of previous years, the work of the arrastre plant has correspondingly increased. The total cargo handled during the year amounted to 324,660 tons, as against 281,653 tons in 1917 and 215,218 tons in 1916.

PROTESTS AND APPEALS.

During the year 195 protests involving the correctness of the decision of customs officers as to the classification or value of imported merchandise or the collection of certain customs charges were presented to the insular collector of customs by virtue of the provisions of section 1370 of the Administrative Code. Of this number, 32 were sustained and 58 were overruled and denied, and 105 were pending action at the close of the year. Of the number overruled, six were taken to the court of first instance on appeal, in three of which cases the decision of the insular collector of customs was sustained by the court, while the other three cases were pending action at the close of the year.

CONSULAR DUTIES.

The consular work with which the insular collector of customs is charged under the provisions of section 84 of the act of Congress of July 1, 1902, involved the shipment during the year on American vessels, including Army transports, of 1,315 seamen, of which number 205 were Americans and 1,110 were Filipinos. The total number of seamen discharged was 1,265, of which number 309 were Americans and 956 were Filipinos. Forty destitute American seamen were cared for and provided board and lodging, and 61 such persons were furnished transportation to the United States at the expense of the United States Government.

One hundred and forty-eight consular invoices and 105 invoices of returned American goods were issued during the year.

BUREAU OF INTERNAL REVENUE.

COLLECTIONS.

The following is a summary of the collections made by the bureau of internal revenue in 1918 as compared with 1917:

Item.	1917	1918
Excise tax:		
Domestic—		
Distilled spirits.....	\$4,189,753.74	\$4,476,835.70
Fermented liquors.....	293,760.00	211,920.00
Manufactured tobacco.....	270,952.74	374,528.48
Cigars.....	262,629.54	314,110.01
Cigarettes.....	5,385,223.82	5,536,566.72
Matches.....	145,340.00	64,248.00
Wines and imitations.....	164,476.15	158,658.04
Total.....	10,712,135.99	11,136,866.95
Coal and coke.....	1,608.01	15,949.63
Imported—		
Distilled spirits.....	253,865.20	179,086.07
Fermented liquors.....	8,068.63	8,695.65
Manufactured tobacco.....	199,421.45	224,528.46
Cigars.....	2.00	93.91
Cigarettes.....	39,278.90	66,066.76
Matches.....	236,854.81	367,638.45
Wines and imitations.....	85,142.59	70,085.03
Skimmed milk.....	27.00	497.20
Total.....	822,660.58	916,691.53
Kerosene or petroleum.....	712,360.83	518,031.47
Naphtha, gasoline, and all lighter products of distillation.....	309,376.56	256,445.98
Lubricating oils.....	71,334.97	92,572.72
Total.....	1,093,072.36	867,050.17
Opium.....	2,730.18	400.00
Coal and coke.....	157,186.55	119,047.76
Cinematographic films.....	40,350.96	29,732.03
Playing cards.....	100,025.05	124,103.33
Total excise taxes.....	12,929,769.68	13,207,841.40
License, business, and occupation taxes:		
Brewers.....	2,762.50	2,430.00
Distillers.....	13,185.00	13,735.00
Rectifiers.....	5,135.00	4,950.00
Retail liquor dealers.....	31,771.00	31,525.50
Retail vino dealers.....	158,544.84	254,784.90
Wholesale liquor dealers.....	60,318.50	87,388.75
Retail dealers in fermented liquors.....	31,477.00	41,463.25
Retail dealers in tuba, basi, and tapuy.....	238,234.75	282,436.19
Wholesale dealers in fermented liquors.....	12,573.00	15,121.00
Dealers in manufactured tobacco.....	236,566.25	285,274.90
Manufacturers of chewing and smoking tobacco.....	1,852.47	1,515.00
Manufacturers of cigars and cigarettes.....	3,152.50	2,828.50
Wholesale peddlers of alcoholic and tobacco products.....	4,531.00	6,325.00
Retail peddlers of alcoholic and tobacco products.....	9,796.50	17,144.10
Manufacturers of and wholesale dealers in motor spirits, mineral and lubricating oils.....	9.00	.....
Retail leaf tobacco dealers.....	112,877.25	160,160.00
Total.....	922,786.56	1,207,082.09

Item.	1917	1918
License, business, and occupation taxes—Continued.		
Merchants and manufacturers.....	P8,900,490.86	P12,803,640.20
Printers, publishers, and lithographers.....	9,914.80	21,065.63
Common carriers.....	88,367.96	109,911.69
Contractors, warehousemen, and others.....	153,872.84	209,474.69
Peddlers of merchandise.....	480,742.89	630,967.95
Total.....	9,633,389.35	13,775,060.25
Stockbrokers.....	6,785.00	7,280.00
Real-estate brokers.....	13,655.00	16,075.00
Customs and immigration brokers.....	1,915.00	2,210.00
Pawnbrokers.....	22,975.00	27,350.00
Theaters, cinematographs, and concert halls.....	23,869.40	23,303.60
Circuses.....	1,317.50	1,535.00
Billiard rooms.....	20,410.19	24,123.69
Lawyers, medical practitioners, architects, land surveyors, engineers, and public accountants.....	64,451.76	71,691.86
Chiropo lists, manicurists, tattooers, and masseurs.....	1,513.00	1,577.50
Pharmacists and barbers.....	12,833.75	14,888.75
Race tracks.....	8,480.00	8,720.00
Merchandise brokers.....	47,374.75	68,378.76
Cockpits.....	560,574.43	718,857.13
Cockfights.....	172,031.86	185,034.90
Opticians and dental surgeons.....	11,362.50	13,373.50
Midwives, cirujanos ministrantes in medicine and dentistry.....	2,680.19	3,038.29
Procuradores judiciales, agentes de negocios, insurance agents, and subagents.....	19,235.00	19,393.50
Photographers, engravers, and professional appraisers or connoisseurs of tobacco, etc.....	13,468.50	15,422.50
Veterinarians, vehicles and bicycles repair shops.....	170.00	110.00
Money lenders.....	28,630.00	29,317.50
Signs, signboards, and billboards.....	7,555.54	6,195.89
Total.....	1,041,688.37	1,257,857.37
Banks and bankers.....	523,728.23	785,139.59
Insurance companies.....	53,268.58	77,030.83
Mines.....	28,685.70	23,873.40
Registered dealers in prohibited drugs.....	2,509.95	4,373.38
Sponge fisheries.....	602.61	141.62
Pearl fisheries.....	6,556.25	5,343.75
Weights and measures.....	159,631.69	172,017.20
Total license, business, and occupation taxes.....	12,372,847.29	17,307,919.48
Cedulas.....	5,351,065.00	5,075,485.50
Franchise taxes.....	247,748.90	273,195.14
Income tax.....	1,182,888.33	2,571,575.29
Documentary stamp tax.....	382,651.40	505,614.87
Inheritance tax.....	5,824.93	75,562.06
Incidental revenue:		
United States internal revenue collected in the Philippines.....	1,253,851.23	1,919,753.11
United States internal revenue collected in the United States.....		98,977.54
Revenue from public forests.....	536,328.17	650,691.66
Miscellaneous stamp collection.....	297.81	116.29
Service income:		
Justice of the peace fees.....	453,037.07	443,548.37
Total stamp and cedula collections.....	34,716,609.81	42,130,280.71
Other collections:		
Mining fees.....	1,547.44	450.00
Tobacco inspection fees.....	170,321.76	210,019.52
City of Manila taxes, charges, etc.....	5,048,891.95	6,167,413.42
Grand total.....	39,937,370.96	48,508,163.65

It can be seen from the foregoing table that the total amount collected during the year 1918 was P48,508,163.65, as compared with a total collection for the year 1917 of P39,937,370.96, an increase of P8,570,792.69, or 21.46 per cent.

APPORTIONMENT OF INTERNAL-REVENUE TAXES AND OTHER COLLECTIONS MADE BY THE BUREAU OF INTERNAL REVENUE.

Pursuant to the provisions of the internal-revenue allotment law (chap. 19 of Act 2711), internal-revenue collections accrue to the various treasuries as shown by the following statement. It will be seen also from the statement that the bureau of internal revenue, aside from collecting strictly internal-revenue taxes, also undertakes the collection of divers taxes, fees, and charges provided by other laws.

Item.	1917.		
	Accruing to—		
	Insular.	Provincial.	Municipal
Excise tax:			
Manufacturers of alcohol and tobacco products—			
Domestic.....	P 10,712,135.99		
Imported.....	822,660.58		
Coal and coke—			
Domestic.....	1,608.01		
Imported.....	157,186.55		
Kerosene or petroleum, imported.....	712,360.83		
Naphtha, gasoline, etc., imported.....	309,376.56		
Lubricating oils, imported.....	71,334.97		
Cinematographic films, imported.....	40,350.96		
Playing cards, imported.....	100,025.05		
Opium.....	2,730.18		
License, business and occupation taxes:			
Dealers in alcohol and tobacco products.....	684,551.81		P 238,234.75
Merchants, manufacturers, common carriers, etc.....	9,633,389.35		
Occupations, trades and professions.....	240,503.99		801,178.38
Banks and bankers.....	523,728.23		
Insurance companies.....	53,268.58		
Mines.....	28,685.70		
Registered dealers in prohibited drugs.....	2,509.95		
Sponge fisheries.....	120.52	P 241.05	241.04
Pearl fisheries.....		6,556.25	
Weights and measures.....		79,815.85	79,815.84
Cedulas.....		3,978,140.75	1,372,924.25
Franchise taxes.....	149,517.16	25,871.29	72,360.45
Income taxes.....	1,182,888.33		
Documentary stamp tax.....	382,951.40		
Inheritance tax.....	5,824.93		
Incidental revenue:			
United States internal revenue collected in the Philippines.....	1,253,851.23		
Revenue from public forest.....	536,328.17		
Miscellaneous stamp collection.....	297.81		
Service income:			
Justice of the peace fees.....	422,585.28	135.00	30,316.70
Total.....	28,030,778.12	4,090,760.19	2,593,071.50
Other collections:			
Mining fees.....	1,547.44		
Tobacco inspection fees.....	170,321.76		
City of Manila taxes, charges, etc.....			5,048,891.95
Internal revenue allotment.....	(3,164,083.55)	1,582,041.78	1,582,041.77
Grand total.....	25,038,563.77	5,672,801.97	9,226,005.22

Item.	1918.		
	Accruing to—		
	Insular.	Provincial.	Municipal.
Excise tax:			
Manufacturers of alcohol and tobacco products—			
Domestic.....	₱11,136,866.95		
Imported.....	916,691.53		
Coal and coke—			
Domestic.....	15,949.63		
Imported.....	119,047.76		
Kerosene or petroleum, imported.....	518,031.47		
Naptha, gasoline, etc., imported.....	256,445.98		
Lubricating oils, imported.....	92,572.72		
Cinematographic films, imported.....	29,732.03		
Playing cards, imported.....	122,103.33		
Opium.....	400.00		
License, business and occupation taxes:			
Dealers in alcohol and tobacco products.....	924,645.90		₱282,436.19
Merchants, manufacturers, common carriers, etc.....	13,775,060.25		
Occupations, trades and professions.....	277,653.05		980,204.32
Banks and bankers.....	785,139.59		
Insurance companies.....	77,030.83		
Mines.....	23,873.40		
Registered dealers in prohibited drugs.....	4,373.98		
Sponges fisheries.....	28.34	₱56.64	56.64
Pearl fisheries.....		5,343.75	
Weights and measures.....		86,008.60	86,008.60
Cedulas.....		3,781,601.50	1,293,884.00
Franchise taxes.....	164,344.65	27,165.47	81,685.02
Income taxes.....	2,571,575.29		
Documentary stamp tax.....	505,614.87		
Inheritance tax.....	75,562.06		
Incidental revenue:			
United States internal revenue collected in the Philippines.....	1,919,753.11		
United States internal revenue collected in the United States.....	98,977.54		
Revenue from public forest.....	650,691.66		
Miscellaneous stamp collection.....	116.29		
Service income:			
Justice of the peace fees.....	416,168.84	534.50	26,845.03
Total.....	35,478,450.45	3,900,710.46	2,751,119.80
Other collections:			
Mining fees.....	450.00		
Tobacco inspection fees.....	210,019.52		
City of Manila taxes, charges, etc.....			6,167,413.42
Internal-revenue allotment.....	(3,164,083.55)	1,582,041.78	1,582,041.77
Grand total.....	32,524,836.42	5,482,752.24	10,500,574.99

COST OF COLLECTION.

The net cost to the insular government of making the above collections during the year 1918 was ₱619,620.41, as compared with ₱603,440.31, the cost during 1917, or an increase of ₱16,180.10. The cost of collection for each peso has decreased from year to year—2.64 centavos in 1913, 2.45 centavos in 1914, 2.07 centavos in 1915, 1.87 centavos in 1916, 1.51 centavos in 1917, and 1.28 centavos in 1918, the total collections for this last year being ₱48,508,163.65.

ALCOHOL PRODUCTS.

Distilled spirits.—The total output from registered distilleries during the calendar year 1918 was 15,931,402 proof liters, in comparison with 15,073,758 proof liters in 1917, an increase of 857,644 proof liters. The quantity of denatured alcohol used for industrial purposes was 867,971 proof liters, as compared with 966,549 proof liters so consumed in 1917.

On December 31, 1918, there were in operation throughout the islands 81 registered stills of modern type, as compared with 80 in 1917, 80 in 1916, 75 in 1915, 79 in 1914, and 75 in 1913. One hundred and five illicit stills were captured by internal-revenue agents during the year 1918, of which 8 were

captured in Cagayan, 1 in the Mountain Province, 59 in Pangasinan, 14 in Samar, 4 in Surigao, 18 in Tayabas, and 1 in Zambales. During the year 1917 there were seized 158 illicit stills.

Wines.—There were removed for domestic consumption during the fiscal year 1918, 1,602,346 gauge liters of still wines and imitation wines, as compared with 1,599,924 gauge liters removed during 1917.

Taxes to the amount of ₱70,085.03 were collected on imported wines and imitation wines in 1918, as against ₱85,142.59 during the preceding year.

Fermented liquors.—The following comparative statement shows the quantity in gauge liters of domestic and imported beer on which taxes were collected, as well as the quantity exported free from taxes during the fiscal years 1917 and 1918:

	1917	1918
	<i>Gauge liters.</i>	<i>Gauge liters.</i>
Domestic.....	5,875,200.00	4,236,200.00
Imported.....	161,372.80	173,913.00
Total.....	6,036,572.80	4,410,113.00
Exported.....	93,274.40	121,093.60

TOBACCO PRODUCTS AND MATCHES.

Smoking and chewing tobacco.—The following comparative statement shows the quantities of domestic smoking and chewing tobacco on which taxes were collected during the fiscal years 1917 and 1918:

Kind.	1917	1918
	<i>Kilos.</i>	<i>Kilos.</i>
Smoking tobacco.....	266,130	450,176
Chewing tobacco.....	192,767	211,393
Total.....	458,897	661,569

Taxes were collected also on 446,723 kilos of imported smoking and chewing tobacco in 1918 and on 389,869 kilos in 1917. During the fiscal year 1918, 2,617,629 kilos of stripped and partially manufactured tobacco were exported, as compared with 624,941 kilos during 1917.

In addition to the domestic smoking and chewing tobacco consumed in these islands on which the tax was paid, the exports of smoking tobacco during the fiscal year 1918 amounted to 35,924 kilos, in comparison with 42,817 kilos during 1917.

Cigars.—The total production of cigars during the year 1918 was 485,674,450, in comparison with 412,138,207 in 1917, or an increase of 73,536,243. Of the first number, 117,651,468 were consumed in the Philippines, 103,151,729 were exported to foreign countries, and 264,871,253 were shipped to the United States, as against 104,460,749, 91,553,148, and 216,124,310, respectively, in 1917.

Through the active cooperation of an effective advertising campaign directed by the Government, the Manila cigar has taken a firm foothold in the American market. Cigar exportations to the United States rose gradually from 114,006,745 in 1916, the year when the tobacco-inspection law, Act 2613, was passed, to 216,124,310 in 1917 and 264,871,253 in 1918. The average price per thousand paid for Manila cigars shipped to the United States in 1918 was ₱43.68, as compared with ₱38.25 paid in 1917.

Exportations of leaf tobacco showed a decrease in 1918 in comparison with those corresponding to 1917, the number of kilos for the first year being 2,957,264 and that for the latter year 3,283,607. The greater number of cigars exported in 1918 and the limited quantity of the 1916 and 1917 tobacco crops are responsible for this condition.

Cigarettes.—The total production during the year was 4,720,005,875 cigarettes, as compared with 4,540,519,812 during the preceding year. Of the first number, 4,600,980,458 were consumed in the islands, 114,535,147 were exported to foreign countries, and 4,490,070 were shipped to the United States, in comparison with 4,482,685,125, 52,278,522, and 5,556,165, respectively, for the fiscal year 1917.

Matches.—The quantity of matches consumed in the islands during the year was 1,079,716 gross boxes, of which 160,620 gross boxes were of domestic manufacture and 919,096.13 were imported, as compared with 955,487.03 for 1917, of which 363,350 gross boxes were of domestic manufacture and 592,137.03 gross boxes were imported.

LICENSE, BUSINESS, AND OCCUPATION TAXES.

Dealers in alcohol and tobacco products.—There were collected as privilege taxes during the fiscal year 1918 ₱1,207,082.09, as against ₱922,786.56 collected during the fiscal year 1917. Of this amount, 3.1 per cent was paid by dealers in distilled and manufactured liquors; 36.9 per cent by dealers in tobacco products, 28.1 per cent by dealers in beer, tuba, basi, tapuy; and 4 per cent by manufacturers and peddlers of liquors and tobacco.

Merchants, manufacturers, and common carriers.—There were collected as percentage taxes during the fiscal year 1918 ₱13,775,060.25, as against ₱9,633,389.35 collected during the fiscal year 1917. Of this amount, 97.5 per cent was paid by merchants, manufacturers, and peddlers; 0.8 per cent by common carriers; and 1.7 per cent by publishers, contractors, warehousemen, and restaurants.

The increase of ₱4,141,670.90 in percentage tax collections is a reflection of the high war prices and increased prosperity of the country, and shows an advance in the volume of internal trade of ₱414,167,090.

Occupations, trades, and professions.—There were collected as privilege taxes on occupations during the fiscal year 1918 ₱1,257,857.37, as against ₱1,041,688.87 during the year 1917. Of this amount, 71.9 per cent was paid by the proprietors of cockpits and 28.1 per cent by lawyers, doctors, civil engineers, surveyors, photographers, and other occupation-tax payers. Pursuant to the provisions of the internal-revenue law, the privilege-tax collections from owners of cockpits and the taxes on cock fights accrue intact to the treasuries of the various municipalities in which such taxes are collected. Seven hundred and fifty-nine municipalities and townships availed themselves of the provisions of the law authorizing the imposition by municipal councils of additional taxes on cockpits. The rate of the additional privilege taxes thus imposed ranges from ₱2 to ₱10,000 per annum. There were 86 municipalities, townships, and municipal districts in which no cockpit tax receipts were issued during the period covered by this report.

Banks and bankers.—The following comparative statement, based upon taxes assessed and collected, shows the average amount of capital employed by, average amount of deposits with, and average amount of circulation of, banks during the period from July 1, 1916, to June 30, 1917, and from July 1, 1917, to June 30, 1918:

	July 1, 1916, to June 30, 1917.	July 1, 1917, to June 30, 1918.
Average capital.....	₱16,448,612.16	₱24,618,186.22
Average deposits.....	48,850,718.13	99,512,419.18
Average circulation.....	6,046,159.83	9,895,504.04

Insurance companies.—The following table, based on tax assessments rendered, shows the total amount of each kind of insurance on which premiums were paid, and the average rate of premiums paid during the calendar years 1916 and 1917:

	Total amount of insurance, 1916.	Average rate of premium.	Total amount of insurance, 1917.	Average rate of premium
		<i>Per cent.</i>		<i>Per cent.</i>
Fire.....	₱231,437,089.54	0.92	₱258,440,911.00	0.97
Marine.....	136,398,797.29	.64	413,129,264.71	.61
Life.....	30,516,358.00	.....	29,063,172.75	.....
Accident.....	916,500.00	.71	810,200.00	1.35
Fidelity and surety.....	14,868,654.16	1.06	42,045,887.09	.54
Typhoon and earthquake.....	3,595,040.00	.38	3,192,818.37	.33
Motor cars.....	664,285.00	3.97	642,598.00	4.19
War (marine).....	2,075,000.00	.49	3,055,200.00	.73

CEDULAS.

There were collected from the sale of cedulas during the year ₱5,075,485.50, as compared with ₱5,351,065 during the preceding year, a decrease of ₱275,579.50. A larger collection from cedula taxes was realized in 1917 than that made in 1918, because of the cedula campaign conducted under the direction of the bureau of internal revenue. There were sold 50,725 less cedulas during the year than during 1917.

FRANCHISE TAXES.

Of the amount of franchise taxes collected, ₱164,344.65 accrued to the insular treasury, ₱105,504.26 to Manila and other municipal treasuries, and ₱3,346.23 to provincial treasuries.

INCOME TAX.

Under the present income-tax law (act of Congress of Sept. 8, 1916, as amended by act of Oct. 3, 1917) there were collected ₱2,571,575.29 as income tax during the calendar year 1918 as against ₱1,182,888.33 collected during the calendar year 1917, an increase of ₱1,388,686.96, or 117.4 per cent. Unlike that of the year 1917, this increase in collection was not principally due to the favorable changes in the law, but rather to the more prosperous condition, enabling corporations and individuals to greatly increase their earnings and in like ratio their tax liability, and to better understanding of the law on the part of the taxpaying public.

PEARL FISHING.

Under the provisions of Act No. 2604, there was collected during the year covered by this report the amount of ₱2,343.75, which accrues intact to the respective provincial treasuries where collected.

SPONGE FISHING.

Under the provisions of Act No. 2584 there was collected the amount of ₱141.62, of which 20 per cent accrues to the insular treasury, 40 per cent to the provincial treasuries, and 40 per cent to the municipal treasuries concerned.

BUREAU OF PRINTING.

VOCATIONAL TRAINING.

The vocational-training feature of the work of the bureau of printing as described in previous annual reports was continued during the period covered by this report. The various classes were maintained with a sufficient quota to provide for all requirements of the service, but it is necessary, owing to the lack of skilled workmen in the local field, that the lower classes be augmented during the current year in order to provide competent craftsmen for future needs. In all, 49 advances were made by apprentices and junior craftsmen during the year.

PERSONNEL.

There were 434 employees on the rolls of the bureau of printing on December 31, 1918. Of these, 427, or 98.4 per cent, were Filipinos, and 7, or 1.6 per cent, Americans.

FISCAL OPERATION.

The product of the bureau for the fiscal year 1918, as during the previous year, was charged at the same uniform scale of prices, the total amounting to ₱1,234,739.29. During that period the cost of operation was ₱1,052,664.97.

The work of the bureau was executed under 11,989 work orders, of which 7,206, amounting to ₱522,121.60, were for the insular government; 3,089, amounting to ₱263,756.83, for the provincial governments, including the city of Ragulo; 905, amounting to ₱31,196.78, for the city of Manila; and for other government offices, the Federal Government, and outside parties, 789, amounting to ₱147,075.17.

APPROPRIATION.

Act No. 2727, for the fiscal year 1918, provided the bureau of printing with a net appropriation of ₱720,098. This sum, although rigid economy was exercised in all of the manufacturing divisions and careful scrutiny was given to orders for all classes of printing and binding, particularly stock forms, was not sufficient to cover the expenses during the year, and this bureau made appeal to the emergency board and to the Philippine Legislature for additional allotments amounting to ₱209,100.

The items of deficiency and emergency appropriations were caused by the considerable increase in production; by substantial increases in the first cost of materials and supplies and the incidental enormous freight charges; by the large increase in the estimated amount of overtime and night work necessitated by the printing of the Philippine census forms, Philippine reports, Philippine council of national defense requirements, emergency printing for departments and bureaus occasioned by new legislation, and by the large amount of printing incident to Red Cross propaganda. As all of the foregoing were unforeseen contingencies, obviously they could not be included in the estimates for 1918.

Considering the bureau of printing as a producing establishment, the additional amounts requested over the appropriations for 1918 are, strictly speaking, not true deficiencies, but merely the investment of additional capital needed to meet a greatly increased output.

Respectfully submitted.

ALBERTO BARRETTO, *Secretary of Finance.*

The GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS,
Manila.

REPORT OF THE SECRETARY OF JUSTICE.

DEPARTMENT OF JUSTICE,
Manila, P. I.

SIR: I have the honor to submit a report of the department of justice for the fiscal year ending December 31, 1918.

JUDICIARY.

SUPREME COURT.

On September 5, 1918, Justice Frederick C. Fisher tendered his resignation, and the same having been accepted, Hon. Percy M. Moir, a judge of first instance since 1907, was appointed on November 21, 1918, to succeed him.

During the year there were 1,316 cases filed in the supreme court, as compared with 1,068 cases filed during the previous year, making an increase of 248 cases. During the same period there was an increase of 542 in the number of cases disposed of and a decrease of 810 in the number of cases pending at the end of the fiscal year.

The business transacted by the supreme court during the year 1918, as reported by the clerk of the supreme court, was as follows:

Cases at the close of business Dec. 31, 1917, inclusive:

Civil.....	961
Criminal.....	239
	<hr/>
	1, 200

Cases filed during the period Jan. 1, 1918, to Dec. 31, 1918, inclusive:

Civil.....	772
Criminal.....	544
	<hr/>
	1, 316

Cases disposed of during the said period:

Civil.....	921
Criminal.....	451
	<hr/>
	1, 372

Cases pending decision at the close of business, Dec. 31, 1918:

Civil.....	335
Criminal.....	55
	<hr/>
	390

Cases docketed but not submitted for hearing:

Civil.....	477
Criminal.....	277
	<hr/>
	754

Bar examination:

Applicants admitted (all Filipinos).....	320
Present at examination.....	304
Passed the examination.....	123

Notaries public appointed by the supreme court during the period Jan. 1 to Dec. 31, 1918.....

48

Fees, fines, and court costs and bar examination fees collected during the said period.....

P28, 721. 30

COURTS OF FIRST INSTANCE.

Three new judges were appointed during the year. Hon. Diego Gloria, who was assistant attorney general since 1901, was appointed on February 13, 1918, judge of the second judicial district. Hon. Louis M. Southworth, a practicing attorney, was appointed judge of first instance for the twenty-third judicial district on June 20, 1918. Assistant Director of Posts Primitivo San Agustin was appointed auxiliary judge for the second group of judicial districts on July 10, 1918.

These appointments were made necessary because of the resignations of Hon. John S. Powell, judge of the twenty-third judicial district, effective May 1, 1918; of Hon. William E. McMahon, judge, eleventh judicial district, effective June 13, 1918; and Hon. Carter D. Johnston, judge, twenty-first judicial district, effective July 1, 1917.

Hon. Ponciano Reyes, late judge, twenty-sixth judicial district, died on Christmas eve.

During the fiscal year 1918, there were 15,425 cases filed in the various courts of first instance throughout the islands, as compared with 16,020 cases filed during the fiscal year 1917. During the same period, 13,213 cases were disposed of, as compared with 14,987 cases disposed of during the fiscal year 1917. The number of cases undisposed of at the end of the fiscal year 1918 was 14,888 as against 12,980 cases pending at the close of the fiscal year 1917.

The amount received as costs, fees, and fines by the various clerks of court during the year was ₱229,789.91, as compared with ₱228,427.48 received during the calendar year 1917. During the same period the amount deposited in the various courts of first instance subject to refund amounted to ₱405,612.55, as compared with ₱256,772.10 deposited during the year previous.

The following tables give a summary of the business handled by the courts of first instance, including the city of Manila, during the year 1918:

Civil cases.

(a) Cases pending on Jan. 1, 1918:	
1. Ordinary civil cases-----	4, 693
2. Probate cases-----	3, 099
3. Land-registration cases-----	850
Total pending-----	<u>9, 542</u>
(b) Cases filed during the year:	
1. Ordinary civil cases-----	4, 257
2. Probate cases-----	1, 055
3. Land-registration cases-----	1, 339
Total filed-----	<u>6, 651</u>
(c) Cases decided during the year-----	3, 470
(d) Cases dismissed during the year-----	<u>1, 589</u>
(e) Cases pending December 31, 1918:	
1. Ordinary civil cases-----	5, 497
2. Probate cases-----	4, 414
3. Land-registration cases-----	1, 223
Total pending-----	<u>11, 134</u>

Criminal cases.

(a) Cases pending Jan. 1, 1918-----	3, 134
(b) Cases filed during the year-----	8, 774
(c) Cases decided during the year-----	4, 648
(d) Cases dismissed during the year-----	3, 506
(e) Cases pending Dec. 31, 1918-----	<u>3, 754</u>

JUSTICES OF THE PEACE COURTS.

The following is a résumé of the business transacted by the justices of the peace throughout the islands during the year 1918:

Civil cases.

Number of cases pending Dec. 31, 1917.....	1,426
Number of cases filed during the year 1918.....	11,791
Number of cases dismissed during the year.....	3,657
Number of cases decided during the year.....	8,713
Number of cases pending Dec. 31, 1918.....	898

Criminal cases.

Number of cases pending Dec. 31, 1917.....	6,923
Number of cases filed during the year 1918.....	70,496
Number of cases dismissed during the year.....	12,181
Number of cases decided during the year.....	58,330
Number of cases pending Dec. 31, 1918.....	6,908
Costs, fees, and fines collected.....	₱362,995.25

NOTE.—The above data are not complete. The Department of Mindanao and Sulu, the Provinces of Palawan and Bukidnon not being included.

GENERAL LAND-REGISTRATION OFFICE.

During the calendar year 1918 there were filed 1,317 ordinary land-registration cases and 27 cadastral cases, as compared with 977 ordinary land-registration cases and 22 cadastral cases, respectively, filed during the calendar year 1917. During the same period there were instituted 19 civil reservation cases as against 33 cases instituted during the previous year.

The following table shows the distribution, by Provinces and the city of Manila, of ordinary applications for registration of titles to real property filed in the general land-registration office up to December 31, 1918:

Provinces.	Number of applications filed during fiscal years—						Total.
	1933 to 1914, inclusive	New fiscal year 1914	1915.	1916	1917	1918	
1. Abra.....	14	1	4	5	6	5	35
2. Albay.....	170	15	10	12	4	2	212
3. Antique.....	18	1	3	1	1	1	25
4. Bataan.....	193	.....	6	6	6	7	231
5. Batangas.....	134	20	29	14	17	24	238
6. Batanes.....	.....	1	.....	.....	.....	.....	1
7. Bohol.....	176	11	5	4	2	3	201
8. Bulacan.....	437	18	32	42	67	56	652
9. Cagaya.....	77	2	19	5	6	3	112
10. Camarines.....	139	6	10	9	11	21	196
11. Capiz.....	40	4	9	13	17	9	92
12. Cavite.....	170	1	8	8	6	15	208
13. Cebu.....	301	13	26	16	11	15	382
14. Ilocos Norte.....	92	3	4	16	25	11	151
15. Ilocos Sur.....	62	1	7	9	7	3	89
16. Iloilo.....	363	25	10	14	7	7	446
17. Isabela.....	48	8	1	13	6	4	80
18. Laguna.....	307	67	70	80	76	119	719
19. Leyte.....	301	14	33	18	6	4	376
20. Manila.....	2,547	192	117	67	52	59	3,034
21. Mindoro.....	103	7	9	12	16	8	155
22. Misamis.....	27	10	3	2	2	3	47
Agusan.....	63	.....	8	.....	1	.....	72
Bukidnon.....	.....	.....	.....	6	.....	7	.....
Cotabato.....	208	.....	2	.....	8	.....	231
23. Davao.....	183	1	7	29	30	13	263
Jolo.....	114	.....	1	1	3	.....	119
Lanao.....	22	.....	.....	8	2	.....	32
Zamboanga.....	138	2	6	13	7	23	189
24. Montañosa.....	78	78	7	47	3	4	217
25. Nueva Ecija.....	363	66	91	118	130	172	940
26. Nueva Vizcaya.....	25	10	11	3	2	2	53
27. Negros Occidental.....	425	61	63	18	13	6	586
28. Negros Oriental.....	74	19	24	9	7	5	138
29. Palawan.....	12	4	2	7	11	1	37
30. Pampanga.....	361	41	57	48	43	73	623
31. Pangasinan.....	270	56	47	77	116	322	883
32. Rizal.....	510	14	40	22	32	49	667
33. Romblon.....	13	.....	2	.....	.....	1	16
34. Samar.....	132	8	15	11	3	6	175
35. Sorsogon.....	165	4	10	8	4	5	196
36. Surigao.....	41	.....	1	2	1	1	46
37. Tarlac.....	392	49	60	67	90	130	788
38. Tayabas.....	260	48	99	84	99	103	693
39. Union.....	89	19	20	14	13	9	164
40. Zambales.....	120	2	8	12	8	6	456
Total.....	9,797	902	996	970	977	1,317	14,959

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The total number of applications for registration of title filed during the fiscal year 1918 by the insular, provincial, and municipal governments, under acts 496, 926, and 2259, is as follows:

Filed by the insular Government under—

Act No. 496.....	0
Act No. 926, sec. 61 (cadastral docket).....	2
Act No. 2259 (cadastral act).....	25

Total.....	27
Filed by provincial governments.....	5
Filed by municipal governments.....	54
Grand total.....	86

The following tabulated statement, by Provinces, including the city of Manila, shows the total number of cadastral cases filed up to December 31, 1918, and the approximate number of lots included therein:

	Number filed during fiscal years—						Total.	
	1907 to 1916.		1917		1918			
	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.
1. Albay.....	2	1,728					2	1,728
2. Bataan.....	3	1,475	1	3			4	1,478
3. Cagayan.....	2	3					2	3
4. Camarines.....	1	10	1	10			2	20
5. Cavite.....	3	993					3	993
6. Cebu.....	12	12,562					12	12,562
7. Ilocos Norte.....	7	6,418					7	6,418
8. Ilocos Sur.....	1	13					1	13
9. Iloilo.....	30	23,810					30	23,810
10. Sulu.....					1	629	1	629
11. Laguna.....			1	443			1	443
12. Leyte.....	2	155			1	2	3	157
13. Manila.....	26	2,842	3	475	9	1,529	38	4,846
14. Mindoro.....	2	92					2	92
15. Misamis.....			1	1			1	1
16. Nueva Ecija.....	5	2,584	2	1,783			7	4,367
17. Nueva Vizcaya.....	1	492					1	492
18. Occidental Negros.....	13	14,040	2	1,945	2	1,839	17	17,824
19. Oriental Negros.....					7	6,660	7	6,660
20. Palawan.....	6	574					6	574
21. Pampanga.....			7	6,289	7	6,877	14	13,166
22. Pangasinan.....	32	25,996	1	1			33	25,997
23. Rizal.....	7	3,382					7	3,382
24. Tarlac.....	5	1,809	2	2,136			7	3,945
25. Tayabas.....	1	12	1	1			2	13
26. Union.....	1	1					1	1
27. Zamboanga.....	10	5,922					10	5,922
Total.....	172	104,913	22	13,087	27	17,536	221	135,536

Of the 1,317 ordinary applications filed during the year 1918, 59 relate to property situated in the city of Manila, with an assessed value of ₱967,427, and 1,258 to property situated in the Provinces, with an assessed value of ₱5,423,114.23.

The following is a summary of the assessed value of the property covered by the applications filed for registration during the year 1918 and the preceding six years:

Manila.			Provinces.		
Fiscal year.	Cases.	Valuation.	Fiscal year.	Cases.	Valuation.
1913.....	214	₱4,951,265.00	1913.....	716	₱16,363,215.72
1914.....	104	3,834,598.98	1914.....	515	4,453,398.22
1914 (new).....	192	4,570,019.00	1914 (new).....	710	3,767,767.00
1915.....	117	2,087,037.00	1915.....	879	5,286,624.55
1916.....	67	1,480,730.00	1916.....	903	5,191,645.61
1917.....	36	1,404,404.00	1917.....	925	5,380,435.40
1918.....	30	307,327.00	1918.....	1,258	5,423,114.23

PUBLIC UTILITY COMMISSION.

WORK OF THE COMMISSION.

The work of the public utility commission during the year 1918 was four times greater than that of previous years. The material development of the country, the abnormal conditions created by the European war, and the enlarged activities of the Philippine government are responsible for this increase of work.

DEALINGS WITH GOVERNMENT BUREAUS AND AGENCIES.

Prior to the passage of Act No. 2694, that is, before March 9, 1917, the board of public utility commissioners had no jurisdiction over public corporations operating any form of public service except as to prescribing the form in which accounts shall be kept. However, since the enactment of said law all municipalities, Provinces, and Departments of the government of the Philippine Islands operating as public utilities were placed under the control and jurisdiction of the public utility commission, the successor of the board of public utility commissioners. The number of municipalities, Provinces, and Departments of the government operating as public utilities is as follows:

Steamers.—Department of Mindanao and Sulu; the provincial boards of Leyte, Mindoro, Cotabato, Bohol, Cebu, Agusan, Lanao, and Palawan.

Automobiles.—The Benguet Auto Line, bureau of public works.

Wharves and docks.—The municipal councils of Romblon, New Washington, Capiz, and Butuan, Agusan; the Department of Mindanao and Sulu; the provincial governments of Surigao, Bohol, Misamis, Mindoro, and Davao.

Ice.—The insular ice plant and cold storage.

Irrigation.—The municipal councils of Rosales and San Fabian, Pangasinan, Abulog, Cagayan.

Electric light.—City of Bagulo.

Water.—The cities of Manila, Cebu, and Iloilo (projected).

Sewer.—The city of Manila.

Telephones and telegraph.—The provincial boards of Nueva Ecija, Pampanga, Oriental Negros, Zambales, Bohol, Iloilo, Laguna, Misamis, Occidental Negros, Rizal, Tarlac, Tayabas, Abra, Lanao, Cotabato, and Bulacan; Bukidnon government telephone system; Ilicos Norte telephone system; provincial telephone line, Pangasinan; Zamboanga telephone system.

Pursuant to the provisions of section 23 of Act No. 2307, as amended by Act No. 2794, any person desiring to obtain a franchise from the Philippine Legislature shall first secure from the public utility commission a certificate of the public necessity and convenience of such franchise. The most important case had in this regard was that of Guillermo Lopez, applying for a certificate of public necessity and convenience of the franchise to construct, operate, and install an electric-light system in the municipalities of Naga and Goa, in the Province of Ambos Camarines. There were cases in which franchises were granted by the Philippine Legislature without first securing certificate of public convenience from the public utility commission. Acts Nos. 2769, 2700, 2750, 2770, and 2771 granted franchises to Messrs. Vicente Lopez, J. V. House, Canuto Octavio Borromeo, Vicente A. Racaza, and Lizarraga Hermanos, respectively, without any previous certificate of public necessity and convenience, but in all these acts a condition was inserted that the franchises will not be considered valid unless the grantees secure from the commission the certificate required in section 23 of the public utilities act.

SUPERVISION AND REGULATION OF PHILIPPINE PUBLIC UTILITIES.

The increase in the number of public utilities operating within the Philippine Islands and their development and progress is really great.

Rates.—All public utilities are required to file their rate schedules with the public utility commission for approval, pursuant to the provisions of subsection (d) of section 15 of Act 2307, as amended by Act 2694. Any increase, reduction, change, or alteration of any existing classification is considered illegal and unlawful without such approval. The most important rate case heard before the commission during the year 1918 was the request of the Philippine Shipowners' Association for authority to charge 75 per cent on its freight rates as already increased. The commission after due investigation decided on

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May 6, 1918, not to accede to the general request of the shipowners for a uniform rate and has considered the case of each steamer separately and granted the rates justified by the profits and losses of each respective steamer. The rate cases during 1918 may be classified as follows:

Rate changes.....	59
Complaints regarding overcharges and rate changes.....	29
Changes of classification of ports.....	2

Service to the public.—All public utilities are required to render, provide, and maintain a safe, proper, and adequate service to the public. Among the important cases heard before the commission concerning objectionable practices on the part of some public utilities which were considered prejudicial to the public, there were five in which the public utility commission ordered the recording of bills of lading; the abstention from using cargo hooks in handling, loading, and unloading of leaf tobacco; the adoption of rules to prevent overcrowding of passengers in cars; and the payment of telephone rentals.

Increase of capital and issuance of stocks.—During the year 1918 only three public utilities requested approval from this commission for authority to increase their capital and to issue new stocks, these utilities being the Tayabas Light & Power Co., the Lucban Electric Light & Power Co., and the Malolos Electric Light & Power Plant Co.

DISPOSAL OF CASES.

The number of cases handled by the public utility commission was as follows:

Cases at the close of business, Dec. 31, 1917.....	33
Cases filed in 1918.....	297
Total.....	330

Classification of the 31 cases pending on Dec. 31, 1917:

Decisions and orders.....	29
Dismissals.....	2
Pending.....	2
Total.....	33

Classification of the 297 cases filed in 1918:

Decisions and orders.....	127
Orders.....	34
Dismissals.....	33
Cases pending at the end of the year 1918.....	103
Total.....	297

BUREAU OF JUSTICE.

CHANGES IN PERSONNEL.

On July 3, 1918, Solicitor General Quintin Paredes was appointed attorney general.

Four vacancies occurred in the legal force of the office as a result of the resignation of Assistant Attorney Jose A. Santos; the appointment of Assistant Attorney Luis P. Torres to the position of judge of the municipal court for the city of Manila; the promotion of Mr. Alexander Reyes, law clerk, to the position of assistant attorney, as hereinafter stated; and the retirement, on August 22, 1918, of Assistant Attorney Robert C. Round, under the provisions of Act No. 2589.

On April 1, 1918, Mr. Manuel V. Moran was appointed assistant attorney of the bureau of justice at ₱3,000 per annum, and on September 12, 1918, Messrs. Pedro Tuason and Alexander Reyes were appointed assistant attorneys at ₱4,000 and ₱3,000 per annum, respectively. Messrs Jose A. Santos and Felipe Ismael were appointed special attorneys of the bureau of justice on July 16, 1918, and October 2, 1918, respectively, the former with assignment in the Philippine National Bank.

WORK OF THE BUREAU.

The work of the bureau of justice considerably increased during the fiscal year 1918. In the legal service of the bureau there were dispatched 6,848 cases, as compared with 5,800 cases dispatched during the year previous, making an increase of 1,048 cases. This may be explained by the great number of court cases handled in the supreme court and in the various courts of first instance in the islands and the increasing activities of the Philippine National Bank. There was, however, a decrease of 104 in the number of opinions rendered during the year, which may be accounted for by the fact that only opinions on important subjects were counted as such, those on minor legal questions being excluded.

The following is a brief statement of the business transacted by the bureau during the fiscal year 1918:

Cases in the supreme court in which the attorney general presented briefs and arguments.....	493
Cases in the supreme court in which this office appeared by motions, etc.....	689
Cases conducted in the courts of first instance of Manila.....	108
Cases conducted in the courts of first instance in the different Provinces throughout the islands by representatives of the attorney general.....	257
Cases conducted in the justice of the peace court of the city of Manila.....	1, 476
Investigations against attorneys in private practice.....	27
Other administrative investigations.....	5
Land-registration cases in which this office appeared and opposed registration.....	697
Land-registration cases examined by this office and in which no opposition was presented.....	894
Land-registration cases in which the insular government was the applicant.....	60
Civil, military, and naval reservation cases conducted by this office on behalf of the representative entities interested therein.....	28
Formal opinions rendered by the attorney general to the chief executive, heads of departments, the Philippine Legislature, chiefs of bureaus, and other officials.....	178
These opinions may be subdivided as follows:	
To the Governor General, heads of departments, and the Philippine Legislature.....	66
To chiefs of bureaus.....	90
To the Postal Savings Bank.....	1
To provincial fiscals.....	10
To all other officials, including municipal officials of the Provinces not provided with fiscals.....	11
Philippine National Bank, applications for loans and mortgages passed upon.....	639
Instruments prepared for the Philippine National Bank.....	1, 200
Drafts of mortgages prepared for the Postal Savings Bank.....	52
Discharges of mortgages for the Postal Savings Bank board.....	45
Administrative circular letters issued to bureau of justice and judiciary employees, including provincial fiscals.....	62
Official routine communications received and disposed of other than opinions.....	44, 827

ADMINISTRATION OF ESTATES OF DECEASED AMERICAN GOVERNMENT EMPLOYEES.

The following is a list of American Government employees who died during the fiscal year 1918 and whose estates had to be administered by the attorney general: Victor E. Kerr, bureau of lands; Thomas C. Lindsley, department quartermaster; Ralph W. MacAdams, bureau of education; Ansel H. Barnes, police department; Charles T. Brede, department quartermaster; James Connors, bureau of posts; Robert W. Gaylor, department quartermaster; C. C. La Roche, Philippine constabulary; John M. Roberts, bureau of education; John McKearney, department quartermaster; Grover C. Sebastian, bureau of education; and Fayette J. Wood, bureau of education.

During the same period the administration of the estates of the following deceased employees was terminated: Archie S. Collins, Chris J. Holland, Fred

H. Loughley, Victor E. Kerr, Michael Flaherty, Thomas C. Lindsley, and Ralph W. MacAdams.

The estates of the following deceased employees were in process of settlement at the close of the fiscal year 1918: A. R. Travers, John McKearney, Peter G. Ferrel, Grover C. Sebastian, Frank Betron, James Connors, Luther Hughes, Fayette J. Wood, Edward McClain, Robert W. Gaylor, Charles T. Brede, C. C. La Roche, Ansel H. Barnes, and John M. Roberts.

Funds, estates of deceased American employees.

Balance, Dec. 31, 1917-----	₱955. 51
Receipts, fiscal year 1918-----	7, 383. 72
	<u>8, 339. 23</u>
Disbursements, fiscal year 1918-----	6, 041. 56
Balance, Dec. 31, 1918-----	2, 297. 67
	<u>8, 339. 23</u>

PROVINCIAL FISCALS.

The resignations of Messrs. Conrado Carballo, fiscal of Iloilo, effective June 11, 1918, and Pablo Tecson, fiscal of Tayabas, effective February 28, 1918; the transfers of Messrs. Jose Sotelo, fiscal of Bataan and Zambales, to the bureau of customs on April 2, 1918, and Pedro Tuason, fiscal of Ilocos Sur, to the bureau of justice on September 12, 1918, and the separation of Mr. Roman Espiritu, fiscal of Pangasinan, from the service on December 1, 1917, on account of age, by virtue of section 1673 of the Administrative Code, caused five vacancies in the positions of provincial fiscals. These vacancies made necessary the appointments of Mr. Juan G. Lesaca as fiscal of Batangas on February 19, 1918; Mr. Felix Samson as fiscal of Tayabas on May 14, 1918; Mr. Sixto de la Costa as fiscal of Bataan and Zambales on February 19, 1918; and Messrs. Gervasio Diaz and Roque Hofleña as fiscals of Antique and Isabela, respectively, on September 11, 1918, and the transfers of other provincial fiscals already in the service.

BUREAU OF PRISONS.

CHANGES IN PERSONNEL.

To fill the position left vacant by the resignation of the assistant director of prisons, Dr. C. G. Thompson, former Director of the Labor Bureau Dr. B. G. Monreal was appointed on October 1, 1918.

Mr. Ramon Victorio, former superintendent of the City Boys' Reformatory, was appointed assistant superintendent of the Iwahig penal colony on April 1, 1918.

Dr. C. E. Norris, chief of the prison sanitation division, resigned from the Government service to engage in private practice, and Dr. A. M. Mañalak, prison surgeon, was designated to take charge of the position temporarily.

PRISON POPULATION.

On December 31, 1918, the prison population of the Philippine Islands was distributed as follows:

Bilibid Prison-----	2, 635
Iwahig penal colony-----	1, 062
Number of the colonists family-----	1 44
San Ramon penal farm-----	593
Working at Corregidor-----	788
Constabulary stations-----	19
Insular prisoners working at provincial jails-----	53
San Lazaro Insane Asylum-----	87
City Boys' Reformatory School-----	4
Luneta police station-----	32
Confined in provincial jails-----	1, 250
Total-----	<u>6, 463</u>

¹ Not included in total.

The total number of insular and provincial prisoners on hand on December 31, 1917, was 6,941, while on December 31, 1918, there were, as shown above, 6,463 in confinement, a decrease of 478 prisoners.

The number of insular prisoners on hand on December 31, 1917, was 5,591 and on December 31, 1918, 5,213.

The average number of insular prisoners in confinement daily during the year was 5,381.69, while the average number during the period covered by the report of the previous year was 5,618.72, a decrease of 237.03.

The number of provincial prisoners on hand December 31, 1917, was 1,350, and on December 31, 1918, 1,250, a decrease of 100.

The number of commitments by the court was 3,474, as against 3,997 for the year 1917.

Of the 3,474 prisoners committed this year, there were only 759 from the Provinces, while 2,715 were from Manila, as against 874 from the Provinces and 3,123 from Manila last year. Those committed from Manila include short-term municipal prisoners convicted of minor offenses or misdemeanors, while those from the Provinces are all insular prisoners, excepting those convicted of opium habit, who are sent to Bilibid for treatment, regardless of their status. The principal crimes and those which show the greatest increase are assault, attempted theft, concubinage, corruption of minors, falsification of public documents, frustrated theft, qualified theft, robbery, and thefts.

PRISONERS' COURT.

During the period covered by this report 3,064 cases for infraction of prison regulations have been disposed of by the prisoners' court, 229 of which have been modified by the reviewing authority—the director of prisons. There have been no changes made in the personnel of the court, and the members thereof have cheerfully performed their duties.

SUBSISTENCE.

The report of the Iwahig penal colony shows an increase of about 1 centavo per capita in the item of subsistence, the total value of supplies consumed being ₱62,006.33, ₱22,549.07 of which is for purchased items, the remainder, ₱39,457.26, being the value of the colony produce, which is 62 per cent of the entire expense for subsistence, an increase of 10 per cent from the previous year.

The San Ramon penal farm reports an increase of about ₱0.0338 per capita. This is due to the increased high cost of purchased commodities and to the unsatisfactory production of the truck garden, due to three successive floods which visited San Ramon during the previous year. The issues of subsistence supplies to colonists during the year totaled about ₱40,520, 63 per cent of which represented farm products.

The average cost of prisoners' subsistence at Bilibid during the year is ₱0.21628 per capital, as compared with ₱0.29908 for the last year, a decrease of ₱0.0828.

The prison vegetable garden has been instrumental to a certain extent in keeping the expense on the items of subsistence at the minimum. It supplies the prison kitchen with fresh vegetables, such as beans, lettuce, radishes, etc., at a reasonable cost.

RELIGIOUS SERVICES.

Religious services have been held each Sunday by the prison Catholic chaplain, and regular daily visits to the prisoners requiring religious attendance were made by him.

Sunday services were also conducted by volunteer Protestant ministers, which aid to encourage religious spirit among the convicts.

A number of magazines, books, and pamphlets on religious literature have been distributed among the inmates.

INDUSTRIAL DIVISION.

In spite of the unsettled condition of the market and sudden fluctuations of prices of materials used in the manufacture of our products and the scarcity of transportation facilities, it is gratifying to note that during the period covered by this report the industrial division of the bureau of prisons succeeded in making a net profit of ₱58,986.12, as against ₱55,859.70 for 1917, an increase of ₱1,326.42.

PROVINCIAL PRISONS.

Periodical reports from judges of the courts of first instance and provincial commanders of constabulary point to the fact that considerable improvement has been accomplished in the provincial prisons throughout the islands. This is nothing but the result of having experienced men in charge of the management of the jails, who have taken a course of instruction in the bureau of prisons.

A number of the jail buildings have been repaired and one or two old ones are now in process of reconstruction.

SCHOOLS.

In addition to the regular and special classes, a shorthand class (Ben Pitman) was inaugurated in the month of August, and later Spanish was introduced with favorable results.

Summary of attendance for December, 1918.

Day school (elementary) :	
Grade I.....	546
Grade II.....	570
Grade III.....	379
Grade IV.....	186
Grade V.....	121
Total.....	1,802
Night school (elementary) :	
Grade I.....	9,921
Grade II.....	2,647
Grade III.....	558
Grade IV.....	772
Grade V.....	33
Total.....	13,931
Special classes:	
Mechanical drawing.....	85
Model drawing.....	459
Shorthand.....	135
Languages: Spanish.....	152
Music.....	234
Total.....	1,084
Grand total.....	18,817

In comparison with the total attendance for the year 1917, a favorable increase, as shown in the following table, will be observed for the year 1918:

	1917	1918	Increase.
Day classes (Grades I-V).....	16,732	19,173	2,441
Night classes (Grades I-V).....	81,007	145,732	64,725
Special classes.....	4,769	8,138	3,369
Total.....	102,508	173,043	70,535

Special attention has been given to instruction on sanitation and hygiene by means of weekly lectures on these subjects.

HEALTH.

The epidemic of influenza which twice appeared all over the islands during the year was the principal cause for the alarming mortality percentage.

During the year 193 deaths occurred at Bilbid, as against 107 of the previous year, 44 of which were prisoners returned sick from Corregidor, and died within some months after arrival at Bilbid. The prison physician reports that 2,674

cases of influenza have been treated in the hospital during the year, 71 of which have developed into lobar pneumonia, causing 31 deaths.

The deaths at the various outstations were as follows:

	1917	1918
Iwahig penal colony.....	23	72
San Ramon penal farm.....	4	46
Corregidor.....	39	68

The chief causes of death among prisoners during the year covered by this report were tuberculosis and influenza. The bureau of prisons has been free from cholera during the year, and three cases of leprosy were discovered, all of whom were infected with the disease at the time of commitment. They have been transferred to the San Lazaro Hospital. Pulmonary tuberculosis continues to hold the first place in regard to morbidity and mortality among prisoners.

Eleven births occurred inside the prison during the year; all of these deliveries were made from women inmates who were in a delicate state at the time of commitment.

IWAHIG PENAL COLONY.

The construction of roads and buildings has been continued with marked progress; about 8,000 coconuts have been planted, and an increase of 44 heads in live stock is reported.

The total expense of operation of the Iwahig penal colony during the year is ₱138,823.85, while the profits for the same period are ₱62,753.79. These profits are derived from colony productions and service income.

In spite of the three successive floods suffered by the San Ramon penal farm during the year 1917, it shows a profit of ₱114,331.43, while the total expense of operation of the farm for the same period is ₱116,738.41. The item of profits includes colony productions and service income.

MISCELLANEOUS.

Compensation act.—On December 31, 1918, there were a total of 639 workmen on the compensation roll, rated as follows: 175 first class, 163 second class, and 301 third class, as against 587 of the previous year. The average number of classified workmen per month, however, during 1917 is 532.5 as against 582 for the present year. A total of ₱12,405.17 was paid to prisoners by operation of this act, as compared with ₱14,372.30 for the last year.

Executions.—The following-named prisoners have been executed during the year:

Name.	Crime committed.	Court.
Minanga.....	Murder.....	Cotabato.
Landasan.....	Robbery with homicide.....	Jolo.
Ruño Parro.....	Murder.....	Bohol
Aminula.....	Robbery with double murder.....	Jolo.
Abu.....	Murder.....	Cotabato.
Tadong.....	do.....	Do.
Leoncio Abajo.....	do.....	Davao
Clemente Gampofa.....	do.....	Iloos Sur.
Roman Guillermo.....	do.....	Do.
Tomas Mangrubang.....	do.....	Do.

Escapes.—There were no escapes from Bilibid Prison during the year. Two escapes were reported from the police stations, both of whom have since been accounted for.

There had been registered six escapes from San Ramon penal farm during the year, thereby making a total of 14 prisoners at large, with the other 7 still unaccounted for in the past years.

During the period covered by this report 154 prisoners have been conditionally pardoned by his excellency the Governor General, the majority of whom were serving sentence for adultery and brigandage.

PHILIPPINE LIBRARY AND MUSEUM.

PERSONNEL.

The director has been on accrued leave since April 11, 1918, and his place was filled by the assistant director, who later resigned, effective September 1, 1918. From this date, in accordance with section 555 of the Administrative Code, the undersecretary of justice took charge of the library until the return of the director on February 28, 1919.

On September 1, 1918, Mr. Manuel de Yriarte, assistant director of the Philippine Library and Museum, left the service of the Government.

Another important loss to the library was due to the promotion to the position of assistant director of civil service on May 1, 1918, of Mr. Enrique V. Filamor, chief of the legislative reference division.

Within the year the library has suffered a great loss through the death of Mr. Mariano Ponce, historical researcher, which occurred in Hongkong on May 23, 1918. Mr. Ponce was one of the Filipinos who took a very active and prominent part with Rizal, M. H. del Pilar, and others in the emancipation of the Philippines and carried on with them a long and persistent campaign therefor in Europe. He was thoroughly acquainted with the history of the Philippines, especially during the time of the Spanish domination and the revolution, and he rendered valuable service as special historical researcher in the Filipiniana division of the Philippine Library. His death proved to be a great loss not only to the bureau but to the country as well.

Three permanent legislative researchers—Messrs. Jose Lopez del Castillo and Manuel Ramirez, members of the Philippine bar, and Prof. Maximo M. Kalaw, chief of the department of political science of the University of the Philippines—were also appointed during the year.

ADDITIONS, DONATIONS, AND LOANS.

It is estimated that there are in the library from 120,000 to 160,000 bound volumes and from 280,000 to 340,000 unbound volumes, including manuscripts, making a grand total of from 400,000 to 500,000 pieces. In these figures are included the additions during 1918, which are more than 80,000 volumes of printed matter.

It is also estimated that the archives division contains more than 5,000,000 documents.

One of the most important acquisitions made by this bureau during the year are the following valuable manuscripts which were bought at ₱10,000.

Morga: *Sucesos de las Islas Filipinas con anotaciones* del Dr. José Rizal.

Rizal: *Memorias de un estudiante de Manila*, which has come to be considered as an autobiography of the great Filipino hero.

Rizal: *Llanto y Risa*.

Rizal: *Mi primer recuerdo*. (Fragmento de mis memorias.)

Rizal: *Manila en 1872*.

Schiller: *William Tell*. Tragedy translated from German to Tagalog by Dr. José Rizal.

Webber, Charles Julius: *La Religion y los religiosos*.

DONATIONS.

There are a number of volumes donated to the library and its branch in Iloilo amounting to 557, which include many valuable books. This figure does not include a considerable number of pamphlets and magazines which have also been donated during the year.

For the museum collection there were received several gifts of great value and interest; 158 paintings, photographs, and transparencies were given by the bureau of public works. Two pictures, "*Arbol en el Pincio*" and "*La Banguera*," by the famous Filipino painter, Fabian de la Rosa, were donated by him.

LOANS.

The following objects of ethnographical and historical importance were also received as temporary deposits in the museum:

From the department of anthropology, University of the Philippines, one rare jar and about 100 human skulls and skeletons; from the city of Manila, one model of Harrison Park.

REQUISITIONS FOR BOOKS.

In accordance with section 1697 of the Administrative Code of 1917 (Act No. 2711), by which the director of the Philippine Library and Museum is empowered to examine all Government purchases of books and other publications with the purpose of avoiding unnecessary duplications, there were submitted during the year 1918, 419 requisitions, which, compared with the number submitted in 1917, which was 295, shows an increase of 124. Of the 419 requisitions in 1918, 275 were forwarded to the secretary of justice for approval and five were disapproved; 114 were sent to the insular purchasing agent and approved without action of the secretary, in accordance with the department's second indorsement of October 15, 1917.

The difficulty of determining unnecessary duplications of purchases of books, because of the absence of a complete catalogue in the library of all the books of the Government, continued during the year. Special efforts have been made by the library to finish the work of listing on cards all the books now in the different bureaus or offices of the Government, but until now there are as yet many branches of the insular government which have not sent in their list or catalogue of books in their custody.

BRANCH LIBRARIES.

In the 1917 report the need and importance of branch libraries in the Provinces have been fully discussed as well as the success attained by the Iloilo branch in the first year of its establishment. Further comment on this matter, therefore, seems unnecessary on this occasion.

As a sequel to the success attained by the Iloilo Branch Library, the year 1918 could have seen the inauguration of another branch, destined to be the most important provincial branch of this institution—the Cebu branch; but because of unavoidable delays consequent on the establishment of such institutions, it was impossible to complete its organization, but within a few weeks this branch will be ready to serve the public for which it was intended.

ACT NO. 2746.

This act, passed by the Philippine Legislature on February 18, 1918, has for its purpose the sending to the United States of America of five graduates of the College of Liberal Arts, who have finished the library science course in that college, to study library science and bibliography. In accordance with this act three assistant cataloguers of this library and one from the library of the bureau of science were appointed. When these pensionados return, they will help a great deal in the organization of provincial libraries.

THE LEGISLATIVE REFERENCE DIVISION.

The division's library.

The number of books reported last year is 4,768. There are additions of 151 by purchase and 93 by gift, making a total of 5,012.

The pamphlet collection of the division reported last year was 2,351 in number and we have received this year 242, making in all 2,593 pamphlets.

Newspaper clipping is being carried on under a system adopted last year. We have had already a great use of our scrapbooks. This work is now being recognized by an appropriation of ₱960 per annum for the position of clipper, which, in the scale of salary given to the different employees of the library, carries with it great importance. It is intended that with a permanent clipper, as provided by the appropriation, this work will not be limited to local papers but be extended to all periodicals dealing with sociology, economics, political science, and statistics.

Circulation.—The collection of the division is loaned exclusively to members of the legislature, Government officials, and professors of the University of the Philippines. Our statistics show slight increase in the number of our borrowers by 117 against 108 last year; but the number of books loaned is 382 against 201, a decisive increase of about 50 per cent.

LEGISLATIVE RESEARCH WORK AND BILL DRAFTING.

After the collecting of materials and rendering them serviceable by means of what we may call library mechanics, the supplying of a comparative study of the administrative experience and legislations on other countries, either in the form of a "selected precedents" or discussions or of a digest or memorandum, and the framing of the bills themselves, are the two functions of the division which can not be overlooked, for they demand expert and professional services. Such being the characteristic of the work, the following statistics can not form an exact basis for a fair judgment of the operation of the division this year. The subject matter of the petitions and inquiries should be taken also into consideration.

The subjects dealt with by the legislative reference division under the different branches of the Government are tabulated as follows:

	Bill drafting.	Reference work.
Department of the interior.....	51	21
Department of public instruction.....	27	3
Department of finance.....	9	7
Department of justice.....	19	19
Department of agriculture and natural resources.....	11	4
Department of commerce and communications.....	32	46
Total.....	149	100

And to compare the number of bills drafted and reference work done in previous years with those of 1918, the following tabulation is given:

	1916	1917	1918
Bill drafting.....	171	159	149
Reference work.....	99	105	102

THE CIRCULATING, REFERENCE, AND PERIODICAL DIVISION.

There are 20,491 readers on the double index cards, of whom 12,634 are active readers. This does not include readers in the University of the Philippines, the colleges, bureaus, or branch libraries to which books are loaned by the division. The record shows 18,396 loaned to such entities during 1918, and the selecting, listing, dispatching, and return of books to and from them have been constant.

A steady stream of American and European readers in military and civic circles have flowed out of Manila in 1918, owing to the war and abnormal conditions, greatly abridging the reading clientele among these classes, but what has been temporarily lost in this respect has been more than covered by the ever-increasing number of Filipinos who are regular book borrowers. These constitute over 8,000 men and women. They are required to be over 17 years of age and all have guarantors.

Table showing total circulation, circulating division, not including reference section, for the years 1911 to 1918.

Fiscal year July to July:	
1911-1912.....	24,609
1912-1913.....	35,555
Whole year; free card system introduced:	
1914.....	78,818
1915.....	112,621
1916.....	128,010
1917.....	139,121
1918.....	114,498

General summary of circulating division, not including reference section, by years, 1916-1918, contrasted.

	1916	1917	1918
By cards.....	113,046	117,915	93,805
Branch and deposit libraries.....	11,616	18,396	18,396
Books issued on memorandum receipts.....	1,653	1,706	1,595
Books issued to reading room.....	1,034	839	1,583
Books mailed to Provinces.....	263	265	119
Total.....	127,612	139,121	114,498

NOTE.—The decrease on circulation was 24,623 for the year. When all the factors are considered—war, epidemic disease, and loss of regular readers returning to their native countries or being deported by the Government—the 18 per cent is less than was expected. A decrease of 20 per cent was expected. Over 1,200 students of the high school were deprived of reading privileges at one stroke, the principal declining, as do other school principals, to indorse their cards and requiring a money deposit of ₱5 each.

Reference and periodical section.

Reference books on hand.....	3,365
Reference sent to Cebu Branch Library.....	65
Reference sent to Iloilo Branch Library.....	78
Reference sent to circulating division.....	71
Total.....	3,579
Bound magazines on hand.....	3,173
Bound magazines sent to Cebu Branch Library.....	45
Total.....	3,218
Subscriptions to periodicals.....	11,054
Gifts (periodicals—free copies).....	9,830
Total.....	20,884
Periodicals on hand prepared for binding.....	1,032
Unbound periodical sets sent to Iloilo Branch Library.....	6
Total.....	1,038
Periodicals collated.....	247
Readers in the reading room.....	81,021
Readers using periodicals.....	65,660
Readers using reference books.....	25,654
Readers of books from circulating division.....	518
Back numbers of periodicals consulted.....	5,298
Reference books mutilated.....	4
Reference books purloined.....	2
Periodicals mutilated.....	16
Periodicals purloined.....	11

Very respectfully,

JOSE ESCALER,
Acting Secretary of Justice.

His excellency the GOVERNOR GENERAL,
Ayuntamiento.

REPORT OF THE SECRETARY OF AGRICULTURE AND NATURAL RESOURCES.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES,

Manila, P. I.

SIR: I have the honor to submit herewith the annual report of the department of agriculture and natural resources for the year ending December 31, 1918. During the year the activities of this department have been increased by the establishment of stock farms provided by Act 2758 of the Philippine Legislature, in force since February 23, 1918. There has not been any change in the organization of the department of agriculture and natural resources since the last report.

BUREAU OF AGRICULTURE.

A comparison of statistics compiled by the bureau of agriculture for the past six years shows conclusively that the year 1918 was a banner year for agriculture in the Philippines, all records being surpassed, not only in the money value of the crops produced, but also as to the number of hectares in cultivation and the amount of crops produced. In round numbers the total value of the six leading crops of the islands, namely, rice, abaca, sugar, coconuts, corn, and tobacco, jumped from the previous high record of ₱241,000,000 for 1917 to ₱350,000,000 for 1918, a net gain for the year of ₱109,000,000, and the highest total ever attained for Philippine agricultural products since the statistical division was established in the bureau in 1913. Compared with the average annual production for the previous five-year period, the 1918 record shows an even greater gain of ₱181,000,000 in value. Compared, likewise, with the averages for this previous five-year period, there is an increase of 371,000 hectares planted to the six leading crops mentioned above, and an increased yield in kilos and liters of 1,434,000,000. Only one crop of the six fails to show an increase in hectarage, in yield, and in value of the product. Corn showed a slight decrease in hectarage and in yield, but the value of the crop produced even then showed a satisfactory gain.

RICE.

First on the list of Philippine agricultural products for 1918 is the standard crop of rice, with an increase of 192,000 hectares in cultivation over the average of the previous five years, an increase in the yield of 1,202,000,000 liters, and an increase in value over the same period of ₱74,000,000, the 1918 totals being—hectares in cultivation, 1,368,140; liters produced, 2,684,628,000; valued at ₱135,163,375, a gain in value over the record crop of 1917 of ₱53,000,000 in round numbers. More gratifying even than the above figures is the marked advance in the average yield per hectare for 1918, which establishes a new record of 26.16 cavans. The average production for the Philippines for the previous five years was 19.41 cavans per hectare, a net gain per hectare in average production of 6.75 cavans.

ABACA.

Abaca comes next in importance, with a total area for 1918 of 512,508 hectares, which produced 166,863,644 kilos, valued at ₱92,493,223, which, compared with the previous five-year period, shows a gain of 62,000 hectares in area, 18,000,000 kilos in production, and an increase in value of ₱54,000,000.

COCONUTS.

The total area planted to coconuts in 1918 was 335,602 hectares, which yielded 346,656,535 kilos of copra, and the total value of all coconut products was ₱56,533,793. Compared in round numbers with the average for the previous five-year period, there is a gain of 73,000 hectares in area planted, 202,000,000 kilos increase in production, and ₱31,000,000 gain in the total value of all coconut products.

SUGAR.

Sugar comes next on the list with an area of 205,511 hectares planted to sugar cane, a production of crude sugar of 396,242,786 kilos and a total value of all sugar-cane products of ₱41,158,788. By comparison with the average of the previous five-year period, sugar shows a gain of 29,000 hectares under cultivation, 54,000,000 kilos in production, and ₱9,000,000 in value.

TOBACCO.

The 1918 record for tobacco shows a hectarage of 78,443, a yield of 61,555,322 kilos of leaf tobacco, worth ₱15,219,155. Compared with the same period as above, there is a gain of 18,000 hectares in area, 17,000,000 kilos in production, and ₱7,000,000 in the value of the crop.

CORN.

There were 418,386 hectares planted to corn in 1918, which produced 397,177,783 liters of shelled corn, valued, together with forage, at ₱21,372,123. Corn shows a decrease in area planted of 3,000 hectares over the five-year average and a decrease in yield of 59,000,000 liters, but a gain in value nevertheless of ₱6,000,000.

THE FOOD CAMPAIGN.

During the year the most important work of the field men of the bureau of agriculture, the agricultural inspectors, farm advisers, and their assistants was that pertaining to the food-production campaign, for which an appropriation of ₱500,000 was made by the legislature. That the efforts to increase food production have brought satisfactory results, the splendid showing for 1918 crops readily attests. The bureau of agriculture activities in this campaign were carried out through the field force by means of demonstration plots and public nurseries, through the cooperative agricultural societies and the rural-credit associations, the purchase of seed and plant materials, instruction in seed selection, soil preparation, home gardens, improved live stock and poultry breeding, public lectures, bulletins, farm publications, etc.

PEST CONTROL.

PLANT QUARANTINE.

The bureau of agriculture maintains quarantine stations at Manila and Zamboanga for plant inspection. The total number of seed and plant materials imported into Manila during the year was 15,045 and the export 7,067. The imports came mostly from Japan, China, Hawaii, and Egypt and many plants were found diseased and condemned.

COCONUT BUD ROT.

Much attention was given to the eradication of this disease in the coconut groves, especially in the Provinces of Laguna, Tayabas, and the Department of Mindanao and Sulu. The work of the inspectors was greatly facilitated by willing cooperation generally extended by coconut growers. In the Provinces of Tayabas, Laguna, and Zamboanga, including Basilan, 14,017,741 trees were inspected. Of these 6,689 were found infected with bud rot and were condemned and burned.

LOCUSTS.

During the year, little damage resulted from locust infestation, most of the Provinces remaining entirely free from the pest. Of the municipalities infested, Buluan, in Cotabato, was hard to eradicate. At the present time the archipelago is practically free from this pest.

ABACA PESTS AND DISEASES.

Inspection similar to that for bud rot in the coconut was made in many plantations during the year, and many diseased plants were found, especially in Laguna, where it was found necessary to issue General Order, No. 64, prohibiting the transportation of abaca plants to other districts not infected.

BAT EXTERMINATION.

Rats were reported to be doing heavy damage in the northern part of Camarines Province. As far as funds and facilities of the bureau permitted, poison (white arsenic) with instructions for its use was given free and rat traps were loaned to farmers. With the limited number of inspectors in the employ of the bureau, it was not possible to give this matter the necessary attention which the case required.

ANIMAL HUSBANDRY.

This important division has for its object the improvement of domestic live stock and poultry. This is done principally by the use of improved sires on the native stock. Stations are maintained at Alabang, where particular attention is given to swine and poultry; at Trinidad Stock Farm, in the Mountain Province; at La Carlota; and breeding stations in the Province of Batangas, Cebu, Iloilo, Mindoro, and Oriental Negros. Under Act 2758, stock farms have been established in Bongabong, Nueva Ecija, and Ubay, Bohol. Two other locations have been selected and will be equipped in the near future, one at Lumang, Laguna, and the other at Bangi, Ilocos Norte.

VETERINARY DIVISION.

RINDERPEST.

The generalized epizootic of this disease, which began to assume serious proportions in 1916, appears to be gradually abating in virulence. The recorded number of cases and deaths in 1918—21,586 new cases and 15,747 deaths—can not, however, be properly compared with the 33,971 cases and 26,951 deaths reported during the preceding year because the data for the last quarter of 1918 is exceedingly incomplete, owing to the fact that the field force were dismissed at the third quarter on account of the exhaustion of funds. Our records show that during the year, 334 new outbreaks occurred, counting each municipality declared or reinfected during the year as a separate outbreak. This number has been surpassed only in 1917, when 448 towns became infected with this disease.

Use of serum.—Experience has demonstrated that the use of serum has had but little real influence in the control of rinderpest. Our veterinarians are now being instructed to employ serum only in cases where they can be reasonably sure that it will prove of some benefit.

Quarantine.—After the proper regulation of cattle importation from disease-infected countries, the next step in the control of rinderpest is the adequate enforcement of quarantines and other measures for its suppression within the country.

Immunization.—The total number of carabaos and cattle immunized during the year were 6,232. During the year 1917, 7,191 heads were immunized. The number of deaths during the immunizing period was 148, or 2.4 per cent. Since 1913 more than 36,000 animals have been immunized against rinderpest by simultaneous inoculations. Apparently less than 1 per cent of these animals afterwards contracted rinderpest.

FOOT-AND-MOUTH DISEASE.

During the year several shipments of cattle arrived badly infected with foot-and mouth disease, namely, August 12, 105 heads from Saigon, French Indo-China, and later shipments from the same country on August 23, September 1, 12, and 21. As a result of these infected shipments, the general orders of the director of agriculture governing the importation of animals from French Indo-China have been amended.

FIBER DIVISION.

This division has charge of the enforcement of the fiber grading and inspection law (Act No. 2389). It also conducts experiments with Manila hemp, agave and allied fibers, kapok, cotton, and miscellaneous tropical fibers. Familiarity acquired by commercial houses dealing in fibers with the Government standards and regulations has rendered it possible to carry on the work of grading and inspection with much less friction than in previous years. The number of bales rejected after inspection was also smaller. During the year there were designated 36 grading stations and 113 grading establishments, an increase of two stations and four establishments recorded for the previous year.

The total production of hemp has been steadily increasing since 1915.

Owing to the slump in our maguey market, greater attention was given to the distribution of sisal bulbs and suckers, sisal being better suited for the stripping machine. Free distribution was limited to 1,000 plants, a fee of ₱3 being charged for every additional thousand.

PUBLICATION DIVISION.

Philippine Agricultural Review.—This is a quarterly publication, in English only, and serves as a record of the scientific experiments performed by the bureau specialists.

Philippine farmer.—This is a monthly publication, issued in both English and Spanish, a practical farm paper, principally for distribution in the Philippines.

Bulletins and Circulars.—Two new bulletins were issued during the year—Plant Propagation, by P. J. Wester, and Sugar Production, by C. W. Hines. Two circulars, Nos. 36 and 37, were also issued—The Vegetable Garden, by A. M. Burton, and Some Observations on Rats, by D. B. Mackie. Some miscellaneous publications were also issued, besides several reprints.

Library.—The library of the bureau is far from complete, but efforts are being made to increase the number of standard books on agriculture as rapidly as funds will permit.

RURAL CREDIT DIVISION.

The year 1918 was a very successful one for the rural credit cooperative associations. December 31, 1917, there were 82 incorporated associations. December 31, 1918, this number had increased to 242, distributed throughout 35 Provinces. Their total capital when incorporated was but ₱122,846, yet by December 31, 1918, this had been increased to ₱320,875. There were a total of 24,822 shareholders in these associations at the close of the year. Of these, 4,693 had borrowed ₱245,362 from their associations. Starting with a capital of ₱250 in many cases, most of these societies now count from one to three thousand pesos of their own capital, and a few control larger amounts. Fifteen associations have been granted loans equal to their paid-in capital by the Philippine National Bank on the security of their capital and the joint and several notes of the five directors. All such loans were made at 8 per cent per annum, the association in turn charging 10 per cent per annum to borrowers.

The first rural-credit association was incorporated October 19, 1916. The progress made since then is shown by the statements outlined above. Rural credit is in its infancy, but it is proving a success beyond question.

ANIMAL INSURANCE.

Act 2573, as amended, requires that at least 10,000 work animals be listed before the insurance shall become operative. Ten agents were employed for this preliminary work. The central office force was organized and recorded 139 municipalities canvassed by the agents and 8,256 work animals (nearly the number required) as listed from 10 Provinces. According to the board, the reserve fund set aside for insurance would be inadequate to guarantee 10,000 insured animals in case a serious epidemic should break out, and for this reason the board presented to the legislature an amendment to the law, asking that more funds be appropriated for insurance purposes.

RECOMMENDATIONS.

The following recommendations are hereby made:

1. That the department of agriculture and natural resources be authorized to establish, through cooperation of the bureaus of science, agriculture, lands,

and the weather bureau, a comprehensive farm survey of the archipelago, to compile information concerning farm areas, soil analysis, rainfall, and climatic conditions, etc., in connection with the division of farm statistics of the bureau of agriculture. There are many calls for information of this character and the need of the cooperation above outlined is urgent.

2. That for the best interests of the public service the matter of the location and administration of irrigation projects be placed in charge of the bureau of agriculture, leaving the construction work only to the supervision of the bureau of public works.

BUREAU OF FORESTRY.

The activities of this office have materially increased during the year not only in the ordinary work but also because of definite steps being taken to make the conservation of the forest resources an actual fact, especially in the case of protecting the mangrove swamps as much as possible under existing conditions and the effective work in clearing the way for the establishment of permanent forest reserves in Provinces where action is most urgent to save the remaining forest. Decisions of the Supreme Court of the Philippine Islands have handicapped the bureau in its laudable work to some extent, but it is hoped that this will not seriously impair the establishment of mangrove forest reserves.

WAR ACTIVITIES.

The bureau cooperated with the Army and Navy authorities in administering their forest reserves and in obtaining wood and minor products from other sources. Information was also furnished various foreign Army and Navy authorities of the allied nations and to the United States Council of National Defense.

Twenty-one Filipino forest officers joined the Philippine Guard, of which number 1 resigned; the other 20 all received commissions. One American member of the bureau was detailed to assist in the mail censor's office.

The Red Cross, the forestry regiment fund, and the Liberty loans were all subscribed liberally by both American and Filipino members of the bureau.

PERSONNEL.

The question of personnel is an exceedingly difficult one. This is especially the case because forest officers, more than almost any other class of Government employees, are subject to special hardships in working in isolated regions; deprived of the advantages of living in centers of population, compelled to spend more for food, footwear, and clothing than those Government employees whose work lies chiefly or entirely in an office; and, finally, often suffering in health from the exertions, deprivations, and exposure they undergo. A number of forest officers have resigned to accept better-paid work, and many others, both of the field and clerical personnel, desired to transfer or resign, but were refused permission.

DIVISION OF FOREST MANAGEMENT.

One hundred and eleven more caligin cases were reported in 1918 than in 1917. This increase was confined to four Provinces only, namely, Negros Occidental, Albay, Camarines, and Samar. This increase is due partly to the misunderstood propaganda for better food production, and partly due to the abnormal prices paid for abaca during the year, as in the last three named Provinces abaca constitutes the main product.

Out of the 13 forest districts, 7 were inspected by the director himself and the rest either by forest supervisors or division chiefs. These inspections have resulted in a greater efficiency on the part of the field men.

To maintain this efficiency at all times, and in order that the work of the subordinate officers in the field could be checked more frequently, three forest supervisors were appointed. On account, however, of the entrance into the Philippine Guard of one supervisor and about 20 rangers, the work planned for the supervisors could not be carried out during the year, and the remaining supervisors were obliged to attend to routine work in their respective districts.

One of the most important offenses noted during the year is the using by lumbermen of local names in classifying the timber, frequently reducing their

groups, and thus reducing the forest charges. To minimize this offense, if not to entirely eliminate it, a circular, which contains the official names of practically all important tree species, as well as their corresponding local names, has recently been issued to all forest officers. These names are based on the new revised list.

But a few licensees were requested to surrender their licenses because of their being constant violators of the forest laws and regulations.

In general, the operations of the licensees were satisfactory.

Very little complaint was received during the year concerning offenses committed by nonlicensees. This decrease is attributed to increased efficiency of patrol work by forest guards.

During the year just past 608 more timber licenses were issued than in the preceding year, or a total of 2,514 in force during 1918.

Two hundred and ninety-nine more firewood licenses were issued during the year than in 1917, and the number of cubic meters cut in 1918 are 722,540, as against 407,698 in 1917. Including firewood licenses, there were 4,519 licenses in force at the end of December, 1918, or an increase of 1,046 over the previous year.

The total amount of forest charges collected during the year is ₱650,691.66, while that of 1917 was ₱536,328.17, or an increase of ₱114,363.49.

It is planned to put the tidal swamps under systematic management some time in 1919, or as soon as they can be surveyed and the question of conflicting ownerships settled. Also, as rapidly as possible, the establishment of forest and agricultural zones will be pushed through if personnel is available for such work.

The principal object of putting these swamps under systematic management is to provide an adequate and continuous supply of firewood and timber at reasonable prices.

An attempt to segregate the forest areas from grasslands in the Cagayan Valley, in order to minimize the cost of land inspection as well as to expedite the work, was made, but had to be temporarily abandoned for lack of personnel.

A working plan was prepared by Forester Oteyza, with the cooperation of two rangers for the Baguio block and the vicinity of the mines. This plan is intended to insure a continuous supply of mine timber for the mines and firewood for the city of Baguio.

Certain improvements have been made in the fire-protection system, and more attention has been paid during the year to cut-over forests.

A shipyard has been opened in Balangan, Bolinao, Pangasinan. Another one—Barrio Lasip, of the same municipality, was recently established. It is said that a shipyard will also be established in the vicinity of Agno, of the same Province, in the near future.

A new station was opened in Baler, in order that more frequent inspection trips through the adjacent territory could be made. The boundary lines in the proposed Mount Banahaw forest zone were reestablished and patrol trails were repaired around Mount Maquiling and Mount Malaraya.

The bureau of forestry has placed the large teak plantation in Jolo under management, but at present the operations are limited to preventing fires and the utilization of defective and matured trees only.

The ranger at Limay reports that the Cadwallader-Gibson Mill is now equipped with two large veneer machines. This company has also installed another sawmill on northwestern side of their concession.

A great deal of time has been devoted to the examination of forest lands claimed by individuals, who are taking advantage of the opportunity offered by the cadastral survey to include whatever parcels of land pleased them. It is, therefore, necessary for a forest officer to accompany surveyors and take notes of all claims to public forest.

THE OFFICE OF THE WOOD EXPERT.

This office inaugurated during the year a closer cooperation with the bureau of internal revenue in the identification of timber, firewood, and minor products in the Manila market.

Over 600 wood specimens, including many species new to the collection, were received from the field during the year, and over 1,000 local name cards from phenological reports and other sources were added to the index. Thirteen logs, fifteen 10-foot planks, about sixty 6-foot planks, and numerous specimens of minor products were installed in the museum. A large number of

tables, typewriter stands, filing cases, and similar furniture, both for the central office and for forest stations, was made in the shop. About 25,000 railway ties and over 500,000 feet of export lumber were inspected by members of this office.

DIVISION OF INVESTIGATION.

The chief activities of the division during 1918 were directed toward the preparation of a series of bulletins on minor forest products and a flora of the woody plants of Mount Maquiling region. The preparation of these series of bulletins seemed highly desirable for the reason that while the minor forest products are less important than timber they are very varied and of great economic value, and particularly at this time it is especially desirable to have in available form information concerning our resources.

Bulletin 15 gives a general account of Philippine bamboos, keys and description of species and notes on their uses, with an account of the growth of bamboos in plantations, rates of growth of mature bamboos, and data on the cost of planting, etc.

Bulletin 16 gives an account of the Philippine forest products that can be used for paper pulp, the supply and cost of harvesting.

Bulletin 17 gives an account of Philippine mangrove swamps, with keys to the species, description and pictures of the species, their economic uses, stands, growth, value for firewood and tannin, also the uses and methods of cultivation of the nipa palm. The swamps occupy between 400,000 to 500,000 hectares and are valuable assets to the people and the Government, and this bulletin should be of great value.

The manuscript for a bulletin on palms, fibers, oils, resins, and gums, and miscellaneous minor forest products has been practically completed, while the flora of Mount Maquiling is in progress.

These bulletins will also serve as texts for the forest school.

Studies are being carried on on growth, seedlings, reproduction, cuttings, durability, oil-bearing nuts, etc., and silvical leaflets prepared.

The work in Baguio has been kept up as formerly, ornaments distributed free of charge, the city roads and parks planted up, and improved fire patrols kept up and general guarding of the city reservation performed.

The forest school was handicapped by lack of directing personnel, and the field trips were taken in conjunction with the reconnaissance parties of the bureau. It is hoped to inaugurate the higher course this year.

The reforestation work on the friar lands in Cebu has been a marked success, and the cooperation with the municipalities of the Ilocos Provinces gives every indication of popular support, but lack of funds prevented the carrying out of the project. In Baguio, in cooperation with the Consolidated Mining Co., the watershed of Antamok Creek is being planted up.

DIVISION OF SAWMILLS AND UTILIZATION.

The majority of the rangers of this division were called upon to perform general administrative work under the other divisions of the bureau in addition to their scaling and concession work, so that time for special studies and grading instruction has been greatly curtailed.

In order to relieve the rangers for general administrative and investigation work, for which they were trained at the forest school, the appointment of guard scalers is being adopted. These men are generally of grammar and intermediate school training, who have had experience in sawmill and logging work. After being given a thorough training in log defects and determination of utilization and waste in the mills, they are assigned to scaling work under the supervision of a ranger experienced in the work.

In spite of the demands on the bureau personnel during the year, five more rangers were given preliminary instruction in grading lumber at the various mills in southern Mindanao, making a total of 10 rangers who have had preliminary training in grading work.

Data on logging and milling methods and costs is being gathered from the different mills in the islands with special reference to the larger and best-managed operations in order to secure figures showing the general cost of lumber production in the islands.

Complete records, as far as the figures can be obtained from the companies, are also kept by amounts and species of the lumber produced and amounts shipped to the various local and foreign markets, and in turn the importa-

tion of foreign lumber and possibilities of replacement with local species is being studied for the purpose of creating, as far as possible, a clear field for native lumber as against American and other woods which have entered the islands in competition, more or less continuously, since the establishment of the lumber industry here.

While the signing of the armistice in Europe in November created some disturbance and uncertainty among the lumber dealers, conditions have remained good with excellent prospect for the coming year.

In spite of a large decrease in exports, owing to the demand on shipping for other products and the heavy freight rates, the larger mills have continued to operate full time and in some cases overtime, with a resulting production of some 62,000,000 board feet for the seven larger concession areas as compared to 56,000,000 board feet in 1917.

The total production for all the mills in the islands was approximately 75,000,000 board feet, as compared to 60,000,000 board feet in 1917.

With this total production of 75,000,000 board feet from the sawmills of the islands, the local markets have continued to be the chief purchasers, taking a larger percentage than during the previous year, or about 68,000,000 board feet—91 per cent, as against 80 per cent.

In addition to the native lumber, there have been imports amounting to 14,879 cubic meters, or 6,308,700 board feet, from the United States and other countries, of which 7,887 cubic meters, or 3,135,000 board feet, was Oregon pine and redwood, as compared with 2,768 cubic meters, or 1,174,000 board feet, in 1917.

Although a certain amount of this increase in pine imports may be attributed to failure of local purchasers to appreciate the comparative qualities of pine and local lumber, a large portion of the lumber has not been sold in the Philippines but has been reexported to India and the Dutch Indies.

While Manila is the chief market in the islands, owing to its importance as a distributing center, the ports of Iloilo and Cebu, in the Visayas and Zamboanga in Mindanao received large shipments during the year in addition to the local demand supplied directly from the sawmills and smaller licensees. The steady settlement and development of Davao Province has led to the establishment of two yards in the town of Davao, which is rapidly developing into an important center.

In spite of the uncertainty created by conditions in Europe, prices continued high throughout the year, with increases over 1917 of 20 to 30 per cent, and in some cases as high as 40 and 50 per cent.

In foreign sales lumbermen have reported numerous inquiries and orders, many of which they have been unable to meet owing to the continued shortage of shipping space during the greater part of the year.

Shipments during 1918 decreased some 12,000 cubic meters as compared with 1917, but this is largely accounted for by the assignment of practically all shipping space to other local products—hemp, copra, oil, etc.—and the very high freight rates met with.

The China market, which is capable of being developed into one of the largest purchasers of Philippine lumber, can be supplied more readily with the release of shipping, and a reduction in freight rates which will permit the placing of lumber on that market at fair prices.

An indication of the possibilities for developing markets in China is found in the United States Commerce Reports for November and December, 1918, on the Chinese lumber markets and possibilities of developing the Douglas fir (Oregon pine) market in South China.

In northern China the above-mentioned reports show that softwoods from America, Japan, and China, together with oak from Japan, at present occupy the chief place in the lumber market. Philippine woods are chiefly imported into Tientsin and vicinity for flooring and interior finish.

However, the importation of 733,172 cubic feet of hardwoods into Tientsin and 188,309 cubic feet in Hankow during 1917, when transportation was difficult and expensive, together with the variety of uses for which Philippine lumber is suited, indicates the excellent prospects available for an active campaign in this region.

Inquiries from Japan, Australia, and South Africa during the past year, while not giving especial promise of much business at present, should lead to further introduction of Philippine lumber in those countries and the establishment of a permanent trade.

DIVISION OF FOREST LANDS AND MAPS.

In order to carry out properly the work of this division, cooperation with other Government branches is essential. Cooperation with the bureau of lands with regard to indicating in detail the different vegetation of lands surveyed is important. Without sufficient information indicated on the plans, this bureau can not very well attend to the necessary opposition by the Government without considerable loss of time and money, occasioned by unnecessary inspection.

The provincial fiscals should be thoroughly advised of the procedure of presenting opposition to land covered with forests by the attorney general. In all cases, technical reports of forest officers should be introduced in the court as evidence with the verbal testimony of the forest officer. During the year this section handled 1,235 land cases, of which actions were taken on 184.

Eighty-four parcels of forest lands, with a total area of 43,213 hectares, 17 ares, and 26 centares, have been registered in accordance with the provision of section 1829 of the Administrative Code. Several applications for registration of land containing heavy stand of timber and other forest products have been received, but, due to the fact that the titles presented supporting those claims were merely land-tax declarations and receipts, those were rejected. The method of claiming land and declaring same for taxation, coupled by the seeming ambiguity of the interpretation of the provision of section 1513 of the Administrative Code, give rise to serious destruction of otherwise valuable Government property. Annually thousands of hectares of land are cleared and thousands of pesos worth of valuable timber are burned which could have been prevented by stricter laws. The admittance of declarations on forest land by the provincial assessors for the purpose of taxation is greatly responsible for the destruction of forests under the shade of ownership once taxes are paid.

During the year there were acted upon the following public-land applications for acquisition of public lands under the provision of public-land acts:

Applications received during 1918-----	11, 722
Certified for agriculture-----	6, 134
Certified for forestry-----	670
Returned uncertified to bureau of lands-----	242
	<hr/> 7, 046
Total pending Dec. 31, 1918-----	4, 676

More than 40 per cent of these 4,676 pending applications have been examined during the month of December and only pending the recommendation of district officers.

Forest reserves are urgently needed in order to carry out the successful work of this bureau. Unless reservations are established in those places where more forestry work is carried out the continuous frictions and serious conflicts arising between licensees and occupants of lands are sure to arise. The work of the bureau and its licensees are invariably hampered, and the exploitation is hindered through lack of full control over the area under management of this bureau.

Seven forest reserves were proposed during the year. One was approved, two were disapproved, and four are still pending for the technical descriptions.

Two forest zones have been definitely located and radical changes have been made from their former boundaries, with the end in view of establishing them as forest reserves. These are the Mount Banahaw and Mount San Cristobal zones in the Provinces of Laguna and Tayabas, and Mount Arayat in the Province of Pampanga.

Sixty-three parcels, with a total area of 6,965 hectares, have been officially established communal forest throughout the Philippines. During the year one parcel was canceled.

There has been prepared a forest map of Luzon, Mindoro, and adjacent islands in the scale of 1:4,000, containing the latest available data. There were also added considerable graphical information to the forest progressive map in the scales of 1:100,000 and 1:20,000. Six thousand seven hundred and sixty-two and eight-tenths kilometers of topographical and forest notes were taken by the field force with 760 hectares, 99 acres of forest valuation. In the drafting section there were also made 1,280 copies of blue prints for public information and for official purposes. Besides numerous small plans for administrative

purposes there also have been made original plans from the different communal forests, model houses for forest stations, auxiliary schooner, and other drafting work connected with general administration.

There were six forest reconnaissance projects completed and reports were available at the end of the year. These reconnaissances cover an area approximately 217,140 hectares, distributed as follows:

1. Mineral region of Paracale and Mambulao, Ambos Camarines, October, 1917, and early part of 1918, comprising an area of 17,900 hectares.
2. Central region of Tayabas, October, 1917, to February, 1918, covering an area of 45,180 hectares.
3. Region between Luis (north) and Salasa (south) Rivers, in Masinloc, Zambales; area, 17,800 hectares.
4. Northern region of Ragay Gulf, Ambos Camarines, December, 1917, to January, 1918; area covered, 70,800 hectares.
5. Coal region of Sibuguey, Zamboanga, December, 1917, to January, 1918; area covered, 46,600 hectares.
6. Cabibihan River, Guinayangan, Tayabas, March, 1918; area, 18,570 hectares.

ADMINISTRATIVE DIVISION.

This division, including accounts, property, finances, and general service, carried on the work efficiently under the handicaps presented during last year, due to resignation of men having received higher grades in the civil-service examination and for the retention of whom no money was available in the appropriation of the bureau. This division is entirely Filipinized. The work of this division has increased materially during the past year, in view of the increase in the number of licenses and the inauguration of certain special projects.

RECOMMENDATIONS.

The undersigned wishes to again repeat the recommendations made in last year's report.

1. The illegal occupation of public land to be punished by law.
2. The penalties for the destruction of forests to be increased.
3. The penalties for evading the payment of forest charges should be materially increased for the second offense.
4. The illegal cutting of forest products should be classed as theft and treated as such.
5. Section 1520 of the Administrative Code should be changed to require the payment of forest charges on all forest products cut or gathered, whether removed from the forest or not, before a license expires.
6. Efficient means for the eradication of water hyacinth should be instituted.

Forest guards should be forbidden to have any pecuniary interest in forest products.

The bureau of forestry should be given positions for qualified surveyors to do the urgent survey work on forest reserves. Cooperation with the bureau of lands, as recommended under the division of forest lands and maps, should be instituted. An attorney of the bureau of justice should be assigned wholly to the legal work of this bureau.

It is recommended that the present system of the disposal of public lands be changed, inasmuch as at present lands are selected by individuals, settled and cultivated to some extent, before surveys have been made, and it is next to impossible to guard the interest of the Government along conservation lines as long as this system is followed. Conflicts are constantly being engendered between neighboring settlers as well as with the Government. No provision is made for possible right of way by the Government for roads, etc., in new areas, and it is a well-known fact, brought out by several investigations throughout the world, that the individual in general is not competent to select land for his own best interest or that of the Government. It is recommended that the Government institute as soon as possible a system of surveying land before settlement, which is now being done on some of the agricultural colonies.

Provision should be made for a permanent forest guard force. An increase in the clerical personnel, not only in number but also in salaries, is essential. Provision should be made for systematic reforestation and reconnaissance on a large scale.

For the forest school and the division of investigation additional buildings are necessary as well as additional equipment to adequately give the higher course and carry on investigative work. Additional cottages are necessary for the housing of the students and personnel of the school and the division of investigation.

Personnel.—As stated last year, the demand for forest officers of the bureau of forestry in the Orient has again been felt, and it is strongly recommended that the salaries be placed on the same basis as all other scientific branches of the Government; that the amount of per diem now received by the rangers be increased, necessitating a change in the Administrative Code; that field clothing, especially shoes, blankets, mosquito nets, and khaki, be bought by the bureau and sold to the men in the field at cost.

It is further recommended that game and fish legislation be made stricter and intrusted to forest officers for administration.

INCOME.

The income of the bureau, as will be noticed from the table in the appendix during the past year, amounts, from the latest figures available, to ₱650,691.61, while the appropriation of the bureau last year, including the deficiency, amounted to ₱352,100, of which ₱332,334.72 were spent, giving a percentage of expenditures to revenues of 51.

BUREAU OF LANDS.

GENERAL.

The functions of the bureau of lands were faithfully preserved and followed during the year ending December 31, 1918. Changes in the organization were few and slight, and all resulted from the growth of well-defined policies of the bureau rather than from radical reforms. The work was steadily increasing parallel with the widening activities of the bureau, but the procedure in which it was performed did not suffer any substantial change.

PERSONNEL.

The bureau began the year 1918 with a total personnel of 478, and ended same with 521, which are 83 and 90 per cent, respectively, of the total number of 576 authorized by the appropriation act for the year 1918 (Act No. 2727). In spite of this handicap, the general work of the bureau was pushed forward as far as it was possible so to do under the circumstances, and the results show clearly that every effort and endeavor was made and exerted.

CHANGES.

Many changes in the personnel occurred during the year, the principal one being that of Mr. Walter E. Jones, assistant director of lands, who was succeeded by Mr. Conrado Carballo.

Changes in the positions of chiefs of divisions occurred in the following divisions, including, of course, those positions held by acting incumbents: Accounting and property division, twice; law division, once; survey and drafting division, thrice; computing section, twice; cadastral section, once; drafting section, once; general map section, twice; and Manila cadastral survey, thrice.

Taking into consideration all these changes, coupled with the shortage of personnel, it is remarkable that, in spite of these unfavorable conditions, the established plan of work of the bureau was not only carried out without any serious interruption and continued smoothly, but also there was in some respects considerable advancement or progress over the work accomplished during the preceding year.

PUBLIC LANDS DIVISION.

During the year 1918 there were several reforms introduced into the routine work hitherto performed in this division, either to fill up some gaps or deficiencies which were being noted from time to time or to further or coordinate its policy with the course taken by legislative actions and judicial rulings.

As in previous years, provincial treasurers and chiefs of survey parties have been used as lands inspectors, and although their participation in the work has, indeed, constituted a valuable and substantial aid to the proper handling and prompt adjustment of conflicts, the inadequacy of the number of personnel, both in the clerical force and in lands inspectors to cope with the great accumulation of work, has nevertheless remained a vexatious problem.

The number of patents issued during the year is relatively less than the number of those issued during the year 1917. This is due on the one hand to the fact that the land must be surveyed as a condition precedent for the issuance of patent, and the surveying division of this bureau lacks sufficient personnel to cope with its accumulating work, and on the other to the fact that many of the parcels of land for which patents are ready for issuance are situated in municipalities or places where cadastral surveys have been started or are about to be started. This being the case, the relative tardiness incident to cadastral surveys is considered preferable to the apparent promptness of isolated ones for the reason that as soon as these general surveys are terminated the decrease now noted will be more than counterbalanced in the long run.

HOMESTEADS.

Eight thousand two hundred and fifty-nine applications were filed during the year 1918, with a decrease of 663 applications from that of the year 1917.

The decrease in the total number of homestead applications, as noted above, is not at all strange if we take into consideration the very abnormal conditions prevailing during the year, which were as unfavorable for the homestead institution as they were encouraging and attractive for other lines of activities. Part of this decrease may be attributed to the inclinations of the people to live in, or to their fond attachment to, the centers of population or in the vicinity thereof, together with the lack of ways and means of communications with isolated or inland places.

And to these very circumstances are due the numerous protests against new applications received on the ground of adverse claims or conflicts with previous applications. Said protests are such in number that they amounted to 3,813 during the year 1918, equivalent to more than three times the 1,222 protests filed during the year 1917.

Out of the total number of protests filed, 269 were sustained, 1,422 were dismissed, and 1,822 are pending report of public lands inspectors.

It is to be regretted that the bureau has neither sufficient facilities to carry on a campaign for the dissemination of information in regard to homesteads and for the settlement of protests, nor adequate force to take charge of the proper enforcement of the law and of the regulations and rulings of the bureau so as to prevent in this way the poor applicants from committing the sad mistake of involving themselves in suits instead of accomplishing their aims of acquiring lands for themselves and their families.

The advance survey of the public lands and the fixing of their boundaries with private properties is undoubtedly the most speedy and effective measure of preventing or avoiding the evils usually incident to homestead contests, but in the meanwhile that this can not be carried out simultaneously throughout the whole archipelago, the more frequent if not permanent presence of lands inspectors in those places where there are many lands applied for, or subject to entry, as homesteads, should be adopted as a subsidiary measure.

The total number of applications approved during the year is 4,278. There is a decrease of 720 from that of the previous year.

SALES.

There were received during the year 716 applications, with an increase of 33 over that of the previous year. The number of actual sales made is 182, with an increase of 45 over that of the preceding year, covering an area of 4,959.6785 hectares. The sales value of the lands is ₱69,573.26, and the amount actually paid is ₱23,768.36. An increase of ₱5,133.03 over the total sales value of the lands sold during 1917 is reported, as well as an increase of ₱3,698.47 over the amount actually paid. There is, however, a decrease of 369.9212 hectares from the total sales made during the previous year. This is due to the fact that the adjudications during 1918 were made mostly to individuals.

LEASES.

There were received during the year 317 lease applications, with an increase of 151 applications over that of the previous year. The leases executed are 24, there being a decrease of 18 from that of the previous year. This is due to the fact, as stated above, that the bureau has been furthering and coordinating its policy in accordance with legislative actions and judicial rulings, the result being a greater delay, but which is convenient and advantageous to the handling of lease applications, especially those filed by corporations.

Ninety-seven protests against lease applications and entries were received during the year. Sixteen of these were sustained and 45 dismissed. There are 36 protests still pending. Decisions on these protests will be rendered as soon as the reports of our inspectors are received.

FREE PATENT.

There were received during the year 1,203 applications, with a decrease of 616 applications from that of the previous year.

The number of patents issued during the year is 259, covering an area of 901,2686 hectares, with a decrease of 1,974 from that of the previous year. The same reason mentioned in the report relative to homestead patents is applicable to free patents. There are at present about 6,000 free patent applications ready for survey. The greater part of these are of lands in the island of Siquijor, and for this reason it is deemed preferable to start cadastral surveys over the entire island in the near future.

FORESHORE AND LANDS UNDER WATER.

During the year there were received 12 applications to lease foreshore and lands under water, as follows: One from Albay, 1 from Davao, 1 from Misamis, 1 from Oriental Negros, 1 from Samar, 2 from Sorsogon, 2 from Surigao, and 3 from Zamboanga.

Five foreshore leases were executed during the year, covering an annual rental of ₱226.

FORESHORE REVOCABLE PERMITS.

The number of applications received during the year is 18, distributed as follows: Four from Misamis, 2 from Rizal, 4 from Capiz, 1 from Cebu, 2 from Leyte, 1 from Agusan, 1 from Oriental Negros, 1 from Zamboanga, 1 from Batangas, and 1 from Samar.

RECLAIMED LAND LEASES.

A certain increase is being noted in the number of reclaimed land lease applications, there being during the year 12, distributed as follows: Albay, 1; Davao, 1; Iloilo, 2; Manila, 7; and Surigao, 1.

On December 11, 1918, the survey of Surigao reclamation, Surigao, Surigao; Macabalan reclamation, Zamboanga, Zamboanga, was begun. It is expected to complete these surveys in the earlier part of 1919.

INSULAR GOVERNMENT PROPERTY.

According to the certified copies furnished this bureau by the office of the Governor General, there were received during the year three applications to lease private property of the insular government, these having been executed and carrying an annual rental of ₱3,035. The total number of executed leases up to date is nine, carrying an annual rental of ₱7,733.

There were received during the year 4,820 certificates of forfeiture. During the year 414 applications to repurchase lands forfeited to the Government have been approved and repurchase effected in the offices of provincial treasurers. One thousand four hundred and eighty-seven certificates of forfeiture have been canceled through requests of provincial treasurers.

TEMPORARY USE OF PRIVATE PROPERTY OF THE INSULAR GOVERNMENT AND FORFEITED LANDS IN CONNECTION WITH THE FOOD PRODUCTION CAMPAIGN FOR THE PURPOSES OF CULTIVATION.

To cooperate with the committee on food production campaign, the bureau of lands, with the approval of the department, has inaugurated the policy of loaning private property of the insular government for purposes of cultivation to farmers at a nominal rental of 1 peso per hectare or fraction thereof.

Pursuant to this policy, several farmers filed applications for temporary use covering one of the lands formerly belonging to private individuals, but which are now private property of the insular government.

RESERVATIONS OTHER THAN TOWNSITES.

During 1918, 13 civil reservations were established by proclamation and executive orders of the Governor General, covering a total of 23,997.2145 hectares.

COAL LEASE APPLICATIONS UNDER ACT 2719.

There were filed during the year 10 coal lease applications. Two leases were executed—one, in favor of W. Huse Chapman, located in Toledo, Cebu, covering an area of 1,120 hectares, and carrying an annual rental of ₱2,800 for the first year and ₱5,600 for the succeeding years; and the other one executed in favor of Leon Rosenthal, located in Batan, Rapu-rapu, Albay, covering an area of 400 hectares, and carrying an annual rental of ₱1,000 for the first year and ₱2,000 for the succeeding years. The latter lease was recently assigned to the Philippine Mining Co.

COAL PERMITS.

There have been received during 1918, 40 applications. Thirteen out of the total number received up to date have been approved, covering a total area of 47,3500 hectares. Five applications were canceled and 26 pending. The greatest number of these applications came from Cebu (39).

PRIVATELY OWNED COAL CLAIMS.

There were received during the year 22 applications for registration in the bureau of lands in accordance with the regulations promulgated by the department of agriculture and natural resources on August 15, 1917, and the applicants were given opportunity to submit valid titles showing ownership in themselves, such as "titulo real" duly registered in the office of the registrar of deeds where the land is located.

PLACER LOCATIONS.

No patents were issued to placer locations during the year.

LODE CLAIMS.

During the year seven patents to lode claims were issued, covering a total area of 61.1183 hectares, located in the Mountain Province.

FRIAR LANDS DIVISION.

GENERAL CONDITIONS.

Until the beginning of the third quarter conditions in the estates with the exception of Talisay-Minglanilla and Banilad estates, Cebu Province, were very encouraging; prospects of abundant crops were in evidence throughout the estates. Unluckily, this promising outlook was marred, due to the persisting drought, which has considerably diminished the flow of water in our irrigation systems, and to the sudden appearance of the "influenza" disease, which prostrated in bed and otherwise incapacitated for work for a long while most of the tenants, as well as their workers, and as a result the fields had to be neglected in the most critical time.

LOTS OCCUPIED BY CHURCHES, CONVENTS, ATRIUMS, YARDS, AND CEMETERIES.

An agreement was arrived at between His Grace the Archbishop of Manila and the director of lands, whereby the church was to pay for all the lands ordered excluded, conditioned that titles therefor be issued in favor of the Roman Catholic Church. This agreement was strictly carried out, and the long-protracted negotiations regarding the matter may be now considered as definitely settled.

CIVIL RESERVATIONS.

Under Executive Order No. 20, series 1918, there were reserved for the Province of Cebu for public purposes 300 vacant lots in the Banilad estate, containing an aggregate area of 634.0205 hectares, upon condition that the Province pay to the friar lands sinking fund the full value thereof together with interest. As the Province did not have sufficient funds to pay the whole amount at once, or ₱32,316, they proposed to make the payment in three installments, which proposition was readily accepted. The first installment, or ₱10,000, has already been paid.

FOOD CAMPAIGN.

To cooperate, in a way, with the increased-production campaign, which has been waived for some time, we issued 138 permits, authorizing persons to provisionally occupy and cultivate an equal number of vacant lots under certain conditions. The area covered by these permits is 104.4952 hectares. The regulations authorizing the issuance of these permits were given wide publicity throughout the estates. However, only in the Talisay-Minglanilla estate did these provisions meet with unanimous approval, because out of the 138 permits issued 120 pertain to that particular estate.

AMENDMENT, FRIAR LANDS LOAN FUND REGULATIONS.

To make the friar lands loans as easy and attractive as possible sections 4, 5, and 7, of the Friar Lands Loan Fund Regulations were amended, requiring annual payment of interest, extending the maximum amount loanable on "preference rights" to 60 per cent. These amendments have so far given very satisfactory results.

IRRIGATION SYSTEM.

Under Act 2727 there were appropriated ₱55,000 for the maintenance and repairs to the friar lands irrigation systems and ₱33,900 more under the Public Works Act No. 2636. The money appropriated under the first act has been mostly allotted and expended, the work having been done by administration; that is to say, by the bureau's force. Regarding the other ₱33,900, this money was duly released by the undersigned and the bureau of public works was intrusted to undertake the reconstructions and repairs to certain projects. Repeated inquiries at the bureau of public works showed that it was necessary to postpone the undertaking of said projects on account of lack of available personnel. As this later item is expendable on or before June 30 next, every possible effort will be made to have said projects attended, to avoid the reversion of the appropriation to the general fund, and, principally, to save the projects from total destruction.

COLLECTIONS.

The collections this year, in spite of the fact that we have sold lands worth ₱1,040,582.93 during the year, as against ₱666,655 last year, have been exactly 4 per cent less than last year. This is due mainly to the reasons stated in the paragraph under the heading "General conditions"; otherwise, we could have easily surpassed last year's collections by ₱100,000 at least.

SAN LAZARO ESTATE.

GENERAL CONDITIONS.

Much business has been done this year in the estate. Immediately upon the passage of Act No. 2765, amending Act No. 2360, all high-priced and unproductive vacant land was immediately disposed of, with the result that there remain

but three small lots vacant. Two of these lots could have been readily disposed of were it not for the fact that the Billibid prison authorities are against the disposal thereof in favor of private persons because same are right against the walls of the prison.

COLLECTIONS.

Due to the numerous sales made this year, the collections, amounting to ₱450,494.64, have exceeded those of last year by the good margin of 22.6 per cent. This is the best collection ever had.

"CENSOS."

One of the "censos" was redeemed this year and title therefor was promptly issued. The "censos" for four parcels of land, the legal ownership of which is vested in the San Lazaro Hospital and the beneficial ownership in other persons, and another parcel in Santa Ana, the legal ownership of which is vested in the Jesuit Order and the beneficial ownership in the San Lazaro Hospital, have not yet been redeemed.

LAW DIVISION.

UNPERFECTED TITLES (CHAP VI, SEC. 59, ACT 926).

There were 778 notices received from the courts of first instance of several Provinces of cases in which the applicants invoked the benefits of Chapter VI of the public-land act. The area covered by these applications aggregated 631,883 hectares, 2 ares, and 85 centares.

CASES UNDER ACT 496.

The following comparative statement shows the action taken by the bureau upon receipt of the notifications of hearing thereof:

	1918	1917
No opposition.....	350	209
Opposition.....	75	52
Total.....	425	261

A rapid glance over the foregoing statements would readily show that there were more registration cases brought under Chapter VI of Act 926 than under Act 496. Comparatively speaking, there is but a limited area of lands in the Philippine Islands covered by perfected Spanish titles, and the majority of those desiring to avail of the benefits of the Torrens system invoke the provisions of Chapter VI of the public-land act, in most cases relying exclusively upon possession and occupation.

COMPULSORY REGISTRATION (CHAP. VI, SEC. 61, ACT 926).

There were two cases filed under this section in the courts during the year—one in Leyte and one in Jolo. These two cases are still pending in the courts of first instance of the respective Provinces.

CADASTRAL CASES (ACT 2259).

Twenty-seven petitions were prepared in this office under this act, distributed as follows: One in Bataan, 10 in Manila, 3 in Occidental Negros, 7 in Oriental Negros, and 6 in Pampanga. During the year 1917 there were only 18 cadastral cases filed in court. This shows that there has been a steadily increasing number of cadastral cases filed every year.

TOWN SITES (CHAP. V, ACT 926).

Up to the present time there have been 18 town sites established under Act 926. There were many other proposed town sites surveyed, but not formally reserved. There were no surveys made of proposed town sites during the year.

All the town site reservations have been subdivided, with the exception of the town sites of Laoag, Limay, San Jose, and Tarlac. The plats of the subdivision of the town sites of Cabcaban and Davao were already submitted to the legislature for approval.

OPERATION UNDER ACT 2777.

Act 2777, providing that certain claims or rights of ownership to parcels of land included in town-site reservations may be filed in the proper court within the period of one year under certain conditions, was passed by the Philippine Legislature and approved May 6, 1918. It took effect October 5, 1918, the date on which it was proclaimed by the Governor General.

Under this act it is the duty of the director of lands to determine the parcels of land coming under the operation of the act and to so certify to the proper court within one year from and after the date on which it takes effect. He shall also fix and determine, through a committee to be appointed by him in each Province where town sites lie, the total expenses incurred in each of the reservations as regards their survey, publication of notices, and other expenses inherent to the creation of said reservations, which expenses, after having been apportioned among the lots, would be paid by the claimants aside from the ordinary registration fees. The work of determining the parcels of land declared public lands within the town sites is almost complete, and certifications would be made to the court as soon as the total expenses have been fixed and apportioned among the lots as required by law.

SUITS FOR POSSESSION.

There were several complaints and answers prepared by this bureau and filed in different justice of the peace courts in an endeavor to protect land grantees in the possession of their holdings, but, due to the inability of the office to attend the hearing of these cases with its own personnel familiar with the fact and circumstances of each case, as a general rule no satisfactory results have been obtained. The only way to avoid such unsatisfactory results is to permit the bureau to have at its disposal a corps of law clerks or public-lands inspectors who can be sent to take personal supervision of such cases.

SURVEYING AND DRAFTING DIVISION.

Notwithstanding the fact that the work of this division has been greatly handicapped due to radical changes in the personnel through the separations, resignations, and transfer of a considerable number of employees, nevertheless every effort has been made to offset these results and to maintain the efficiency of the field work that is being carried out by the bureau.

CADASTRAL SURVEYS.

The cadastral survey of the Philippines inaugurated a few years ago has been carried throughout the year in spite of unfavorable conditions. At the end of the year—that is, on December 31, 1918—36 cadastral projects were in progress in the field. Twelve of these were inaugurated during the year 1918 and 16 were completed.

There are several municipalities which have been authorized in previous years and which have not as yet been surveyed.

Due to the shortage in personnel the division can not, however, meet the ever-increasing demands for cadastral surveys.

COST OF CADASTRAL SURVEYS.

Up to December 31, 1918, the cadastral account was as follows:

Total expenses of the bureau of lands and the courts.....	₱3, 421, 779. 74
Less insular government share, as required by law.....	343, 693. 94
Total to be paid by the provincial and municipal governments and the property owners.....	3, 078, 085. 80
Payments made by Provinces, municipalities, and property owners	100, 110. 34
Unpaid balance, Dec. 31, 1918.....	2, 977, 975. 46

CADASTRAL COLLECTIONS.

During the year the collections of the cost of cadastral surveys which have already been decreed have been the following:

Repayments	₱25,366.62
Interests and penalties.....	7,269.06
Total	32,635.68

REGISTRATION OF CADASTRAL SURVEYS.

During the year 24 cadastral cases have been decreed by the courts, consisting of 23,228 lots, comprising an area of 49,434.5 hectares. A summary statement of the cadastral cases in the course of registration proceedings is as follows:

	Cases.	Lots.	Hectares.
Cadastral surveys:			
Filed in courts.....	25	15,189	48,092.71
Amended in accordance with decisions of courts.....	18	11,386	41,566.41
Decreed during 1918.....	24	23,228	49,434.5

PUBLIC-LAND SURVEYS.

The survey of public lands executed under the various provisions of the public-land act has been continued, and during the year the following has been the work performed:

	Surveys.	Parcels.	Area, in hectares.	Cost.
Free patents.....	224	224	808.4526	₱9,804.16
Homesteads.....	218	218	2571.8155	8,733.42
Purchase, individuals.....	9	9	118.8058	564.50
Total.....	451	451	3,499.0739	19,102.08

The following statement gives that of the surveys of public lands the cost of which is reimbursable:

	Surveys.	Parcels.	Area, in hectares.	Cost.
Town-site subdivision.....	1	2	3.9596	₱13.79
Investigation of public domain, sec. 61, Act 926.....	2	80	1,122.1641	5,115.91
Lease.....	22	22	7,776.7037	7,681.08
Purchase, corporation.....	1	1	834.9980	443.98
Insular reservation.....	1	1	10.5826	123.76
Provincial reservation.....	2	23	2,559.4981	2,977.91
Lease, cadastral.....	1	1	113.1205	31.13
Total.....	30	130	12,476.0266	16,387.56

COMPARATIVE COSTS.

A study of the statistics on the costs of executing nonreimbursable surveys, such as free patents, homestead, and purchases by individuals, will clearly give an idea of the advantages to be derived in executing these surveys whenever possible in conjunction with the cadastral surveys:

	Cost per parcel.		Cost per hectare.		Average area per parcel, in hectares.	
	1917	1918	1917	1918	1917	1918
Free patents.....	97.47	42.00	22.78	11.64	4.28	3.61
Homesteads.....	64.37	40.06	5.60	3.40	11.50	11.80
Purchase, individuals.....	95.74	62.72	8.10	4.75	11.78	13.20
Investigation of public domain.....	24.71	63.95	.50	4.56	49.07	14.03
Town-site subdivision.....	16.98	6.89	113.00	3.48	.14	1.98
Leases, corporation.....	808.45	443.98	1.63	.50	429.78	885.00
Insular reservation.....	3,240.39	123.76	.19	11.69	17,223.78	10.58
Provincial reservation.....	140.11	129.47	1.16	17.51	7.92	111.28

MISCELLANEOUS SURVEYS.

There have been several surveys of mining claims, as follows:

	Surveys.	Parcels.	Area in hectares.	Cost.
Coal claims.....	5	5	1,914.7590	₱1,719.16
Lode claims.....	24	24	174.0320	4,329.07
Total.....	29	29	2,088.7910	6,048.23

Under the provisions of Act 2719 many applications for coal lease are being filed, and in the very near future it will be necessary to extend the activities of this bureau concerning mineral surveys.

FORESHORE LEASES.

During the year only four surveys, consisting of five parcels, with a total area of 1.5494 hectares, were executed at a cost of ₱297.88.

UNPERFECTED TITLE SURVEYS (SEC. 58, ACT 926.)

During 1918 only 341 surveys, consisting of 713 parcels, with a total area of 14,697.1148 hectares, were surveyed at a cost of ₱35,420.75.

UNPERFECTED TITLE SURVEYS BY PRIVATE SURVEYORS.

During 1918 there were presented 2,993 surveys, which consist of 6,906 parcels, with a total of 53,895.8987 hectares. The total cost of verifying this work of private surveyors during 1918 has amounted to ₱24,088.91. This represents a considerable increase over the cost incurred in 1917, which was ₱16,870.95.

LOCATION-MONUMENT SURVEYS.

The road surveys executed during the year for the purpose of determining the position of location monuments comprise a length of 97 kilometers, distributed as follows by Provinces:

Province:	Kilometers.
Bataan.....	11.3
Cebu.....	11.7
Ilocos Sur.....	2.1
Palawan.....	6.3
Rizal.....	9.3
Sorsogon.....	31.5
Tarlac.....	22.3
Union.....	2.5
Total.....	97.0

It is very important that these road surveys be continued in order to determine the location monuments of many municipalities where such monuments do not exist as yet and where many surveys are executed by qualified private surveyors.

PRIVATE SURVEYORS.

The total number of surveyors duly authorized to execute surveys in accordance with the requirements of Act 1875 and its amendments is 253.

FINANCIAL STATEMENTS.

There is a proportional increase in the receipts and expenditures of the bureau during the year 1918 over the preceding year, consisting of the sums of ₱118,583.06 and ₱123,993.89, respectively.

RECOMMENDATIONS.

In those Provinces, or even municipalities, where numerous parcels or extensive public lands covered by applications or subject to entry are located a local land office should be opened under the charge of either a public lands inspector or a competent surveyor. This local land officer would help the applicants, inspect the premises, investigate claims, settle disputes over public lands, and run the preliminary lines by compass, which in the hands of a fairly practical man would be very accurate; in fact, sufficient for all the necessities of this office until the final survey is made. In this way a greater number of applications could be approved without unnecessary delay, and a smaller number of contests would arise.

Independently of cadastral surveys, which are principally intended for the registration of titles to private properties, the compulsory registration provided for in section 61 of Act No. 926 should be given greater impulse to definitely settle these claims, more or less founded, to large and valuable tracts of lands, which are being kept idle and closed to entry by homesteaders or settlers on account of such claims.

The public lands division must be reorganized so that it will be composed of three sections, to wit, the general and administrative section, homestead section, and mineral lands section, the last two being the ones to be created.

These measures imply the necessary increase in the number of personnel as well as in the appropriation for this bureau, but it is evident that the results which are expected to be obtained sufficiently justify the adoption thereof.

BUREAU OF SCIENCE.

In spite of the retirement of several of the scientific staff and the withdrawal of a large number of men to enter the United States National Army, the demands upon the bureau of science have not abated and, with the remaining personnel, the bureau of science has strained itself to be of the greatest service to the public. Owing to the prevalence of epidemic diseases, such as smallpox, cholera, and influenza, and to the inadequate supply of scientific employees in Philippine industrial operations, such as the production of sugar, cement, alcohol, etc., the bureau of science has been called to perform a very great number of analyses and examinations, to manufacture an unusually large amount of serums, to answer many technical inquiries, and to supply professional men temporarily or to give technical advice and supervision on the ground. Requests for information have been carefully replied to in writing on an exceedingly large number of all manner of subjects. In addition to the large number of written replies there have been a vastly greater number of replies in telephone conversations and personal interviews. In spite of this information to the public the bureau of science has been greatly undermanned at a time when there was need for greatly increased activity.

WAR WORK.

Wherever the bureau of science has been able to assist in war work other duties have been temporarily suspended in order that whatever assistance was desired might be given. The technical employees have rendered various services, especially in medical, chemical warfare, quartermaster, and in Siberian relief work. Large quantities of antityphoid serum, tetanus antitoxin,

smallpox vaccine, typhoid triple vaccine, and limited amounts of several other bacterial vaccines have been manufactured and supplied for the Bilbid prisoners at Fort Mills, the Siberian refugees under the American Red Cross, or the Philippines Division of the United States National Army. A course in immunology and serology was given to the medical student officers of the latter by the chief of the serum section. The preparation of a large amount of culture media and stains was done for the Philippines Division of the United States National Army. Professional advice has been given, and various poisonous gases have been manufactured or furnished in quantity for the United States National Army officers' gas defense training school. Advice and assistance have been rendered to the Chemical Warfare Service in expediting and increasing the efficiency of the production of charcoal from coconut shells for shipment to the United States for use in the manufacture of gas masks, and with regard to the possible utilization of other Philippine products, such as pill and lumbang shells, for the production of gas-mask charcoal.

Tests have been performed for the ordnance and other branches of the Philippines Department of the United States Army with regard to war materials and new ordnance supplies of an explosive nature. Flares have been compounded for officers stationed at Fort William McKinley. Explanations of technical notes regarding new chemical compounds recently coming into use for gas offensive and defensive warfare, recommendations regarding types of timber best adapted to ship and aeroplane manufacture, and advice and data regarding increased production of castor oil or oil from other plants for lubricating motor machinery in aeroplanes have been given. By technical assistance and the performance of a large number of analyses the bureau of science has assisted coconut oil producers to increase their output and speed up their shipments in order that the oil might be available in the United States as a source of glycerine and for other purposes. In order to assist the War Trade Board and others the utilization of potash from the ashes of mangrove, copra cake, tobacco stems and waste, banana stalks, hemp waste, etc., and of sulphur deposits of Negros, Biliran Island, and other mineral resources have been investigated. The bureau of science has cooperated with the American Library Association Library War Service.

REORGANIZATION OF THE PHILIPPINE JOURNAL OF SCIENCE.

With the beginning of 1919 the sections of the Philippine Journal of Science will be combined, and the publication will be issued as a monthly. Each number will be larger than the present bimonthly issue. The policy with regard to the character and scope of the material published will be continued. As heretofore, the journal is intended to be the scientific organ of the Philippine Government, and will be devoted to the scientific and commercial interests of the Tropics; and its aim will be to collect and publish in one place original scientific information and material relating to the Philippine Islands.

COOPERATION AND PUBLICITY.

Besides the cooperation in war work with the Chemical Warfare Service and other military organizations that has been indicated under a former heading, the bureau of science has been largely consulted by and has been of considerable service to individuals and private concerns, as well as many branches of the Government, in substituting new methods of procedure and new materials for those that have been interfered with or interrupted by the war. The printed information contained in the Philippine Journal of Science, Mineral Resources, Press Bulletins, etc., has been in greater demand than ever before.

Cooperation has been given in purely scientific work, as well as along industrial lines. The courtesy of laboratory space and equipment granted to Mr. H. A. Lee, plant pathologist of the United States Department of Agriculture, who was sent to the Philippines over a year ago to study the diseases of citrus (lemons, limes, oranges, etc.), known as citrus canker, which had been accidentally introduced into the United States, and which was, and still is, causing losses to the citrus industry in the southern United States, has been continued. Similar courtesy has been extended to Dr. W. H. Weston, of the same institution, who was sent to the Philippines to study a disease of corn that has not as yet appeared in the United States. The disease is of so serious a nature that the authorities of the United States Department of Agriculture have deemed it

essential to obtain a prior thorough knowledge of the disease and definite knowledge of the life history of the fungus causing it in order that, should it be introduced into the United States, it might be intelligently controlled. Dr. Walter T. Swingle, chief of the division of crop physiology and plant breeding, United States Department of Agriculture, is another investigator who has utilized the facilities of the bureau of science during his stay in Manila.

Mining engineers visiting the islands with the object of investigating Philippine mineral resources have been extended every courtesy by the bureau of science and have availed themselves of its mineral collections and its technical reports and other publications with regard to Philippine geology. In systematic botanical work cooperation has been continued between the bureau of science and several institutions in neighboring countries. Assistance in obtaining cultures has been given to medical organizations in various parts of the world. Industrial and other material has been sent to various investigators.

MANUFACTURE OF TIKITIKI AND AUTOLYZED YEAST EXTRACTS.

Under the provisions of Acts 2376, 2714, and 2744 the bureau of science has continued its work of preparing extract of tikitiki for the treatment of infantile beriberi. A stock has been continually kept on hand, and during the year about 500 liters of extract have been prepared, probably sufficient to treat more than 10,000 infants, as compared with 400 liters of extract in 1917, 300 in 1916, 200 in 1915, and 58 liters in 1914. Formerly the death rate of infants afflicted with beriberi was 95 per cent, but by the use of this extract the rate has been reduced to practically nil, except where the cases are reported too late for satisfactory treatment. The greater part of the stock prepared was distributed through the Liga Nacional Filipina para la Proteccion de la Primera Infancia.

A certain amount of autolyzed yeast extract was prepared by the bureau of science for experimental work in the treatment of human beriberi, and this was used by Dr. N. M. Saleeby in cases of adult beriberi.

PROPOSED NEW SERUM LABORATORY.

The bureau of science serum laboratory is the only institution in the Philippine Islands where serums and vaccines can be manufactured. There is a constantly increasing local demand for antidyenteric, antimeningococcic, antitetanic, and other serums (on hand, being experimented with, or that are not manufactured owing to lack of room), as well as for vaccine virus, which demand it is difficult to meet.

Normally the bureau of science has manufactured 150,000 units of vaccine virus per month, but since April, 1918, the output has been about quadrupled, and still the reserve stock is very low. A contract is in effect with the Philippine health service for the manufacture of 300,000 units per month for 1919. Next year it will be necessary to increase the number of cattle in order to meet the demands of the Philippine health service and of the public. The bureau of science with its present equipment can greatly increase the output of serums and vaccine virus, the only limiting factor being stable room.

Arrangements have been made whereby the necessary part of the Alabang property south of the Mangagate River is to be transferred from the bureau of agriculture to the bureau of science. When the premises are in readiness to receive the serum and vaccine work, this branch of the scientific work will be removed to Alabang.

PREPARATION AND FREE DISTRIBUTION OF ANTITYPHOID VACCINE.

Under the provisions of Act 2743, the bureau of science has begun the preparation of antityphoid vaccine for free distribution. With the ₱5,000 appropriated the bureau of science has estimated that it can manufacture 21,000 1 c. c. ampules or doses of typhoid and paratyphoid A. & B. vaccine, which is sufficient for 7,000 persons, at the rate of 3 doses per person. The first vaccine was ready for distribution on November 7, and to date 3,030 ampules have been prepared and are awaiting distribution by the public-welfare board of the Philippine Islands.

GEOGRAPHICAL NAMES.

An executive committee, consisting of the directors of the bureaus of coast surveys, science, and posts, considers the spelling of geographical names submitted for action and reports its recommendations to the Philippine Committee

on Geographical Names. During the year 1918, decisions with regard to 1,936 geographical names were made, as compared with 367 in 1917. This completes all the municipalities and barrios in the Philippine Islands the spellings of which have been submitted for action.

CARNIVAL EXHIBIT.

Such of the subjects of scientific study and industrial investigation and of the products of the various activities of the bureau of science as can be exhibited, in so far as the available space of three compartments would permit, were shown at the 1918 Philippine carnival.

TECHNICAL AND SCIENTIFIC EMPLOYEES.

The bureau of science needs additional well-trained and able scientific employees in practically every line of endeavor, and should be immediately strengthened by good men in every line who could devote themselves aggressively to the big problems of Philippine industries and the development of industrial resources. The director was commissioned to secure an organic chemist and a geologist in the United States, but under existing conditions and the great demand elsewhere for such men was unable to do so in spite of the greatest effort. Now that the war is over men will be available, and a great many of the highest training and ability should be secured for the bureau of science regardless of the compensation.

BIOLOGICAL LABORATORY.

Routing examinations of water, milk, foodstuffs, blood, and sputum for gonococci and for plague, leprosy, cholera organisms, typhoid, and dysentery have been continued. A notable feature of this work is the number of examinations made for the Philippine Health Service in connection with the campaign for the detection of carriers of typhoid and dysentery bacilli. Cholera appeared in Manila in September, and, though the outbreak did not prove extensive, it caused a great increase in the number of examinations required for purposes of diagnosis and of detection of carriers.

As heretofore, bacteriologists have been assigned from time to time for microscopic diagnosis on leper-collecting expeditions of the Philippine Health Service. A few health officers were sent by the Philippine Health Service to the bureau of science to take the course of laboratory instructions reported last year under the heading "Instructions for District Health Officers."

Research has been begun in connection with the recent severe influenza epidemic, and that on nonagglutinating cholera vibrios and pathogenic fungi has been continued. There still remains in the Philippine Islands a fertile field for medical research.

BOTANY.

Botanical exploration of the archipelago has been continued and extended by valuable collections made from the little known parts of Panay, Ilocos Norte, Rizal, and Camarines Provinces.

The collections of Philippine plants have been studied and identified and the new species described as received, those from Panay and from Ilocos Norte having been noteworthy in the number of forms new to the archipelago and to science. Since the beginning of botanical work in the bureau of science material, assembled as far as possible from all parts of the archipelago, has received systematic enumeration as a necessary preliminary to the preparation of a general flora.

Mr. Peter Nelson, of the Guam Experiment Station, who had undertaken a botanical exploration of Guam with the first \$100 from the Robinson memorial fund of the New York Botanical Garden, has already submitted material, amounting to about 200 numbers, to the bureau of science.

A continuation of the work on Philippine fungi has resulted in practically completing an enumeration of all-known Philippine fungi with their essential synonyms. Some work has been carried on on plant diseases. The extensive work over periods of years on the vegetation on Mount Maquiling has been submitted to the printer under the title "The Vegetation of Philippine Mountains; the Relation of the Environment to the Physical Types at Different

Altitudes." The compilation of data regarding local medicinal plants has been continued.

The herbarium has shown a satisfactory growth in Philippine accessions during the year. Foreign exchanges have been reduced to a minimum on account of transportation difficulties and the general inhibiting effect of war conditions. The total accessions for the year are 10,086 specimens, as compared with 12,711 specimens in 1917. There are now 196,205 mounted specimens in the herbarium.

FISHERIES.

This work has continued, as heretofore, in cooperation with the other branches of the bureau. A scientific assistant has been added and numerous small collections of fishes have been studied and identified. A large number of inquiries with regard to various fisheries, fish ponds, etc., have been answered.

A supply of mosquito fish is continually kept on hand for distribution and several lots have been distributed to those who have applied.

The bureau of science has a collection of cobras from which it is segregating venom and is experimenting in the manufacture of anticobra serum. Formerly it was believed that the dahon palay was a very poisonous snake and was responsible for many deaths of harvest hands. For a long time it was believed that cobras were rare in the Philippines. As a result of careful study by specialists of the bureau of science it has been shown that they are comparatively abundant and probably deaths reported from the bite of the dahon palay actually result from that of the cobra. The cobra normally is a very shy snake and probably promptly retreats after biting, so that when a person has been bitten in a rice field and the area is surrounded, the cobra has already escaped. The dahon palay being prevalent is usually found and the biting attributed to him.

As it is now death probably always results from the bite of the cobra, and a successful serum will save many lives.

ORNITHOLOGY AND TAXIDERMY.

The work of the section of ornithology and taxidermy has been continued along the former lines and has diminished neither in quality nor in quantity. A large amount of additional data has been collected on the food of birds, and specimens have been added to the scientific study collection of Philippine birds. Large collections of birds, plants, and insects were made in Antique Province, and some additional information on the food of birds was collected at the same time. The birds and plants will be reported by the bureau of science. The insects have been sent to various specialists for identification. One paper on insects has already been received for publication. Other collecting trips were made into Bulacan and Pampanga Provinces. The important study of the food of birds, especially those that seem to damage crops, has been continued by the examination of the stomach contents in the laboratory, in so far as other work permitted.

ENTOMOLOGY.

The need for the closest cooperation between bacteriologists, entomologists, and other scientists is continually manifest. For example, in the United States there are two very bad bacterial bee diseases, and scientists should work together to prevent their introduction into the Philippine Islands. The Administrative Code of 1917 (Act No. 2711), section 1883, provides that "Silkworms, their eggs or cocoons, or the moths which produce silkworm eggs, shall not be imported into the Philippine Islands except by the bureau of science." Legislation similar to this is in effect with regard to bees in the Hawaiian Islands, and the Territory of Hawaii has been successful in preventing the introduction of deleterious diseases into that Territory. Domestic bees have been successfully introduced from Hawaii into Guam without the introduction of any disease. If they can be successfully maintained in the Philippine Islands without the introduction of disease it is believed that there is an excellent opportunity for their cultivation.

The bureau of science has continued to raise silkworms and to distribute eggs to persons prepared properly to care for them.

CHEMICAL LABORATORY.

Some very good Filipino analysts are being developed from graduates of the local universities. The field of industrial chemistry is opening up in the Philippines, and the bureau of science must have trained industrial chemists and not merely analysts.

Owing to the number of chemists in the bureau of science who have volunteered for war work, or who have left the Government service, fewer results have been prepared for publication than in any previous year. However, work along industrial chemical lines in the Philippines is constantly increasing and it is believed that the bureau of science has been more frequently called upon for, and has given, more advice with regard to industrial problems than heretofore.

GENERAL, INORGANIC, AND PHYSICAL CHEMISTRY.

Routine.

The routine work has been greater in variety than in former years.

The refining of Philippine gold and other precious metals always has been done in the United States until it was undertaken by this division about six months ago in connection with the assaying work. Gold bullion as it comes from the mine is too impure and too brittle for the manufacture of jewelry. Therefore steps have been taken to carry on the refining of gold in the bureau of science in order to encourage local gold-mining enterprises and at the same time to aid both the jewelers in securing a supply of gold and the Government in preventing jewelers from melting American gold coin for jewelry purposes.

The standardization of coconut shell was undertaken at the request of United States Army authorities in connection with the coconut shell "buying campaign," which was initiated by the procurement officer of the Chemical Warfare Service.

Several tons of coconut shell charcoal have been prepared by the bureau of science in order to assist the Chemical Warfare Service in setting a standard as to the percentage of volatile combustible matter that charcoal purchased by the United States Government should be allowed to contain.

Experiments on the comparative gas-absorption power of charcoal prepared from coconut shell, mangrove wood, and lumbang and pill shells have been made with a view to determining the efficiency of charcoals prepared from materials available in commercial quantities in the Philippine Islands.

The bureau of science has received many inquiries with regard to the type of furnaces used in glass making and in brick burning. To answer these the bureau has prepared a design for a glass furnace with a capacity of approximately 5,000 bottles and a design for a brick furnace with a capacity of 5,000 bricks. There has been a demand for the plan of the bureau of science limekiln.

Investigation.

Large-scale experiments prove that wood and coconut shells are cheaper and more convenient fuels for limestone burning than coal.

During the coconut shell buying campaign initiated a few months ago by the Chemical Warfare Service of the United States Army, a market which did not before exist was created for coconut shell. The demand for coconut shells was met at very reasonable prices, often as low as ₱8 per metric ton, delivered to the nearest railroad station. After the war was over the demand for the coconut shell came to an end also. However, it is believed that the results obtained by the bureau of science with coconut shell in limestone burning will give new incentive to those who have been supplying the Army with this fuel.

The present war has brought about a shortage in glass bottles and other ordinary glass articles as well as an increase in their price. The results obtained by the bureau of science in its glass-making experiments are very encouraging, and prove that glass bottles, demijohns, glass jars, etc., of good quality can be manufactured from Philippine materials.

Studies made by the bureau of science on lumbang oils have created a great deal of interest among oil manufacturers. Several local concerns who heretofore have devoted their efforts exclusively to the manufacture of coconut oil are now turning their attention to the manufacture of lumbang oils in commercial quantities.

The importation of pig iron into the Philippine Islands is increasing considerably from year to year, and the bureau of science has made some investigations in order to ascertain the conditions peculiar to the smelting of iron ores found in the Philippines with the object of stimulating the production of good grade pig-iron castings.

A study of the mechanical properties of Philippine coir and coir cordage as compared with abaca, and also a study of the mechanical properties of Philippine bast fiber ropes, have been completed and manuscripts on these subjects prepared.

Investigations made by the bureau of science have served private enterprises as the working bases in the development of industries formerly unknown in the Philippines. The Philippine By-Products Co. has recently been established to exploit especially the recovery of potash from the ash of tobacco waste, copra cake, and other plant wastes. Other by-products which up to the present time are largely being wasted, but if properly developed may become a source of income to the islands, are glycerin, molasses, bromine, iodine, tannin, bleaching powder, chloroform, acetic acid and its derivatives, wood alcohol, and several other products derived from the dry distillation of woods, etc.

ORGANIC CHEMISTRY.

The work of the division is very important and requires the services of men with experience, particularly those who have specialized in food analysis and drug analysis in addition to organic chemistry. The routine analytical work comprises official and private analyses of oils, fats, and waxes; all classes of foodstuffs, both imported and domestic; native drugs and proprietary medicines; opium assays, toxicological examinations, and other work of a chemico-legal nature. The demand by the medical profession for clinical analyses has been somewhat excessive and shows that medical men attach increasing importance to careful chemical analyses of blood, urines, and feces.

Aid has been given to the insular oil industries not only by performing their chemical analyses, but by personal visits to the factories and by investigations of their minor problems. Copra produced in the Philippines by the sulphur dioxide method has received most favorable comment from the mill men. Much work has been done among the distilleries in aiding them to gain a greater production of alcohol from molasses, a product which until recently had been largely a waste product in the Philippines.

The Iloilo sugar laboratory has been reequipped and opened for continuous service to the sugar industry in the Philippines.

The plant for the manufacture of extract of tiktiki has been segregated in a well-equipped room and is now operating under perfect conditions. Samples of the extract kept for over a year show no signs of deterioration. All demands for the extract have been filled promptly and the product has given the greatest satisfaction.

Work of an investigational nature has been seriously curtailed by the lack of personnel as well as by the increased demands made for outside consultation work and by the greater number of more complex time-consuming analyses that have been performed. Nevertheless, the work on the chemical investigation of medicinal plants has been continued and valuable results achieved. Methods and standards have been formulated for the preparation of the main Philippine prepared foods and such standards have been accepted by the board of food and drug inspection. The foods for which standards have been made are the bagoongs, patis, tinto dulce, tinto seco, and others.

DIVISION OF MINES.

The number of inquiries that have come during the year from the general public has been very large and several hundreds have been answered. Consultations with mining prospectors and operators, determination of mineral and rock specimens, and the examination of rocks of various classes have taken a great deal of time.

Because of the limited personnel it has been impossible to keep up the usual quota of field work. In addition to the routine demands, a reconnaissance trip was made to the coal properties of Mr. Esteban de la Rama, at Escalante, Occidental Negros. In April and May a geological reconnaissance of Lubang and the neighboring islands was carried on for the purpose of determining the extent and quality of quartzose sand deposits reported to have been found in

those islands. In response to a request from the United States War Trade Board regarding sulphur deposits in the Philippine Islands, a general reconnaissance of the sulphur deposits at Silay, Occidental Negros and southern Camiguin Island, Misamis, was made during the months of August and September. Unfortunately, the deposits are of small extent and of no great commercial value. In October various coal mine properties which are being developed and operated on the Island of Cebu were visited. Additional information was gathered with regard to raw cement materials found in the vicinity of Naga, Cebu. Several smaller investigations were made.

In spite of war conditions, which have greatly affected the cost of transportation of mining machinery, fuel, and chemicals used in the mining industry, Philippine mining has made progress during the year. Coal mining activities have been revived. The Philippine National Coal Co. anticipate a large output in the near future. Prospecting of several of the Philippine oil fields has been resumed and Mr. Anderson is continuing the development of his oil and asphalt properties in Leyte. The Colorado Gold Mining Co., of Masbate, stopped operations for a few months in order to repair and remodel its mill. The Syndicate Mining Co. mill at Aroroy, Masbate, has been enlarged. Severe storms caused the sinking of some of the dredges, which considerably curtailed the gold production. New and promising galena veins have been reported from Marinduque, and it is understood they are being developed. Prospecting and testing of new placer grounds in Mindanao also have been reported. Considerable interest has been shown in the copper deposits in Mancayan and Suyoc, and testing of the placer ground along the Abra Valley is being carried on. The Benguet Consolidated Mining Co., in the Mountain Province, has shown increased gold production.

The responsibility of this branch of the bureau of science is entirely too great for the personnel available. In order to be acquainted with mining operations and to undertake the necessary geologic work the bureau of science should have at least two geologists, a mining engineer, and a metallurgist, besides the necessary minor employees. Furthermore, other coal mines will no doubt begin operation soon, and, according to the law, the bureau of science is responsible for the proper inspection of such operations. Also, the oil and coal fields of Mindanao should receive detailed study with regard to their economic value. The personnel should be increased with these growing activities, and the reported valuable mineral resources, such as tin in Palawan and cinnabar in Palawan or Buruanga island should be investigated.

LIBRARY.

The total number of bound volumes accessioned was 3,498, making a total on December 31, 1918, of 42,218 bound volumes, 4,268 unbound volumes, and 21,121 unbound pamphlets and parts.

POWER PLANT.

During the year 1917 the bureau of science experimented with, and recommended the use of, copra cake as fuel under boilers. Since August, 1918, this fuel has been used in the bureau of science power plant. This was not done sooner, due to the difficulty of securing a regular supply, and even now with an insular government contract deliveries are made with much irregularity and coal frequently has to be used; but the use of copra cake under the boilers has effected a considerable saving.

AQUARIUM.

The aquarium of the bureau of science has continued to be much appreciated. It is clearly one of the most attractive features of Manila and is largely patronized by visitors in the city. Many new, interesting, and beautiful specimens were added to the collection.

RECOMMENDATIONS.

The bureau of science needs additional specialists in all its branches, especially in geology and industrial chemistry to care for the rapidly developing mineral and economic industries. Without the employment of these there is a grave danger that the development by the Government of such industries in the Philippine Islands will be discredited. Much important constructive work in

the bureau of science that should have been done has remained undone for lack of personnel, and there is the keenest need for the extension of economic research in every line.

With regard to the specific needs of the bureau of science, many of those that have been pointed out in former reports have not yet been realized for lack of personnel, but the necessity is as keen as ever. There is wealth in the Philippine Islands that remains untouched due primarily to inadequate investigation. Successful economic development of the Philippines must be preceded by adequate research.

WEATHER BUREAU.

METEOROLOGICAL DIVISION.

Weather and typhoons.—One depression and six typhoons have traversed the Philippine Islands during the year 1918. With the exception of only one, of which we shall speak presently, not much damage was done by them while crossing the archipelago. They were distributed by months as follows: One depression in March; one typhoon in each of the months of June, July, and August; two typhoons in October; and one in December. The three typhoons of June, July, and August passed between Luzon and Formosa, while one of the two typhoons of October touched only the northeasternmost part of Luzon to the east of Aparri. The other typhoon of October was somewhat deformed, at least when it crossed the Philippines through the central part of Luzon.

The last and worst typhoon of the year, which will go down to history as a most remarkable one, was that of Christmas day. It proved to be very destructive, particularly for the Provinces of Sorsogon, Albay, and Romblon, and caused the wreck of the steamer *Quantico* on the western coast of Tablas Island. Several other smaller vessels were also victims of the storm. As it has been stated, this typhoon was very remarkable, not only because of its appearance toward the end of December, when typhoons are hardly ever observed in Luzon, but most particularly on account of its abnormal track and the unexpected change of direction which it undertook just one day before it struck the Island of Luzon. The typhoon was noticed by Manila observatory as early as December 20 to the South of Yap.

Of all the other typhoons of the Far East, the most important is the one that struck Guam in the early morning of July 6, doing great damage to the buildings, roads, trees, etc. It is considered one of the most violent typhoons that have crossed that island in many years. Its track was at the beginning so inclined to the west that great fears were entertained for the central and northern part of Luzon. But fortunately for the Philippines, a slight inclination to northwest began to take place in the direction of the typhoon on the 7th, until on the 9th to 12th it moved north toward Japan.

Manila Observatory has sent during the year to the foreign observatories of the Far East 100 typhoon warnings as against 82 during the preceding year, and 101 in 1916. This number would have been even greater were it not for the extraordinary delay with which weather reports from foreign stations, particularly from Japan and the Loochoos, have been received during the whole year 1918.

While there has been so much trouble in sending and receiving telegraphic weather reports to and from foreign observatories, the telegraphic service established in 1916 between Guam and Manila, through the effective cooperation of the naval authorities of Cavite and Guam, has been proved most satisfactory up to the present.

Although the total amount of rainfall for the year 1918 in the Philippines is rather above the normal, yet there was a general lack of rain during November and the greatest part of December, which was in several Provinces highly detrimental to agriculture.

The number of barometers compared and tested this year is 99 as against 112 in 1917.

As in previous years the Weather Bureau has cooperated with the work of foreign observatories as well as of other Government offices or private institutions in and outside of Manila.

SECONDARY STATIONS.

During this year the first-class station of Ormoc and the third-class station of Bolinao have been reduced to third class and to a rain station, respectively, while the rain station of Batag has been raised to a third-class station. A new

official rain station was established in Camp Keithley, Lanao, in the month of May, although the salary of the observer up to January 1, 1919, had to be paid by the Department of Mindanao and Sulu through an agreement made between Gov. Carpenter and the director of the weather bureau.

At Tiguaon, Ambos Camarines, a new seismic station was opened on April 26, and meteorological observations similar to those of a third-class station have been also taken there regularly. As in the preceding years, meteorological observations similar to those of second-class stations and rain stations, respectively, have been likewise made at the seismic station of Ambulong and the magnetic station of Antipolo. Aside from these three, the official meteorological stations maintained by the weather bureau at the end of 1918 were 57—1 branch observatory at Baguio; 6 first-class stations, 4 of them in Luzon, and 2 in the Visayas; 11 second-class stations, 5 in Luzon, 4 in the Visayas, and 2 in Mindanao; 29 third-class stations, and 10 rain stations.

Twenty-one new volunteer or cooperative stations have been added during the year to the 32 in existence at the end of 1917, thus making a total of 53 volunteer stations.

SEISMIC DIVISION.

The year 1918 must be considered as one of extraordinary seismic activity in the Philippines. The seismographs in the weather bureau recorded more than 500 disturbances, most of which occurred within the limits of the archipelago. One hundred and twenty of these disturbances were felt in different parts of the archipelago. Unfortunately, two of them caused great damage and claimed some victims in southern Mindanao and Batanes Islands.

Among the distant earthquakes recorded, mention must be made of one which shook eastern China in February, causing damage in Fowchow. Southern California was shaken by a relatively strong one in April, and in May, La Serena, Chile, suffered great destruction.

Southern Mindanao was horribly shaken on the 15th of August by one of the greatest disturbances of the earth. It shook the southern coasts of the Cotabato district, destroying houses, opening cracks in the ground, and causing landslides on the hills. Immediately after a wave tide invaded the land, carrying everything and drowning a great number of persons and animals.

Nearly a month later, on the 13th of September, an earthquake of like intensity but of very limited extension shook the two main islands of the Batanes group—Batan and Sabtan—completely destroying the two towns of Ivana and Sabtan, situated, respectively, on the west and on the east coast of the said two islands. On examining the ruins of these two unfortunate towns one is convinced that the principal cause of such tremendous damage was the too heavy and faulty constructed roofs of the houses, the timbers, being without any connection, pushing the walls on which they were embedded. It can partially also be accounted for by the condition of the soil. An inspection was made by the weather bureau to this district, and a recommendation was afterwards made as to the reconstruction of damaged buildings.

During the month of April a new meteorological-seismic station was opened at Tiguaon, Ambos Camarines. This station was considered necessary after the seismic period occurred in the region of the Isarog Mountain in October, 1917.

Since the month of May there have been in operation seven provincial stations with special seismographs—Ambulong, Baguio, Tiguaon, Sorosogon, Mambajao, Butuan, and Agaña, Guam.

MAGNETIC DIVISION.

The routine work of this division has been continued during the year 1918, like in former years, without interruption, both in the central office and in the magnetic observatory at Antipolo. Early in the year the hourly observations or magnetic report of 1911 was distributed, while that of 1912 is being printed, and the year 1913 is ready for publication.

The magnetic character of this year may be considered as mild; the number of calm and nearly calm days exceeding notably the disturbed. Their respective numbers are as follows: Calm, 134; slightly disturbed, 209; disturbed, 22. Only six of the disturbances may be reported on account of their duration and general nature.

During the hours corresponding to the total solar eclipse, which on the 8th of June was visible across the United States of America, special observations were

taken in cooperation with and upon the request of the department of terrestrial magnetism of Washington. These observations have been published in the review, "Terrestrial magnetism and atmospheric electricity," issued by the said department.

ASTRONOMICAL DIVISION.

Time service.—Every day of the year, including Sundays and official holidays, time signals have been sent during five minutes (10.55 to 11 a. m.) from the observatory to all the stations connected by telegraph or cable with the central post office of Manila. At noon the time ball has been dropped in the central observatory. With the kindly cooperation of the Cavite Naval Radio Station, time signals by radio are sent every night during five minutes (9.55 to 10 p. m.). It is to be acknowledged with thanks that this service has been rendered possible by the courtesy and interest taken for the utility of shipping by the bureau of posts. The Manila central post office keeps an employee who every night at 9.50 establishes the necessary connections between Manila Observatory and the Cavite Naval Radio Station.

One hundred and forty-four chronometers have been received in the observatory to be rated; 7 clocks and, as an average, 20 chronometers, have been daily compared with the standard clock and rated.

In order to know the error with which the time signal at noon is given the initial moment of the fall of the time ball has been recorded 116 times in the chronograph in connection with the standard clock. The largest recorded errors were:

Sec.	Sec.	Sec.
0. 32, January 21.	0. 45, June 29.	0. 45, September 14.
. 40, February 6.	. 34, August 24.	. 32, September 30.
. 34, June 24.	. 45, September 13.	. 33, October 23.

The average error of the 116 records is less than 0.2 second.

Three hundred and twenty-five observations on solar radiation were taken during the year with the Angstrom compensating pyrheliometer. The Callendar's sunshine receiver and electrical recorder has been working satisfactorily throughout the year.

A considerable amount of time has been spent in the library for the good maintenance and cataloguing of publications, in showing visitors the observatory, to some of which an opportunity has been given, in favorable conditions, to see the moon or some other celestial objects, and in answering several letters asking about subjects connected with astronomy.

PERSONNEL.

Nationality.—The composition of the personnel of the weather bureau as to nationality has remained practically unchanged, over 91 per cent being Filipinos.

IMPROVEMENTS.

The central office has been furnished with a so-called "indicating anemometer," which will enable the forecaster and the employee on duty to observe at any moment from their desks the actual velocity of the wind.

RECOMMENDATIONS.

1. A number of telegraphic stations of a more permanent and consistent character than the present ones should be established, by wireless or otherwise, well distributed throughout the archipelago, and most particularly along the eastern coasts. The following places are suggested as the more convenient for the purpose of forecasting the most dangerous typhoons that come from the Pacific: Surigao, Guluian, Batag, Virac, Polillo, Casiguran (Tayabas Province), and Cape Engaño.

2. A law should be enacted establishing in the Philippines a compulsory installation of wireless equipment in all interisland steamers with a displacement of 100 tons or more, thus enabling all the captains both to receive all the typhoon warnings, which are issued daily and even twice or thrice every day by Manila Observatory, and to furnish us their own observations, which may frequently prove to be of great value for further accurate forecastings.

on the direction and intensity of typhoons. During the Christmas typhoon mentioned above a typhoon warning sent by Manila Observatory to the captain of the steamer *Viscaya* at about noon of the 25th was of great value to him, and the same might have been the case with the captain of the steamer *Quantico* had the latter been provided, like the *Viscaya*, with wireless equipment.

3. As in many cases typhoons give only a limited time for the issuing of proper warnings, it is highly recommended that the central office of the weather bureau be provided also with an adequate wireless equipment which may allow direct communication between Manila Observatory and the interisland steamers. It is the opinion of this department that the advantages to be derived therefrom would more than fully compensate the expenses of this installation.

AGRICULTURAL COLONIES IN THE PROVINCE OF COTABATO.

Climatic conditions have also affected these colonies, especially those in the Rio Grande Valley, so far as rice is concerned. The unprecedented flood in the month of June, followed by a dry spell, completed the destruction of the entire crops. There have only been harvested from various colonies 2,526 cavans of rice, as compared with 11,509 cavans in the year 1917. On the other hand, the corn crop has been fairly well and a total harvest amounting to 6,488.36 cavans has been gathered. For the purpose of encouraging the colonists in the improvement of their homesteads, there has been established in each of these colonies a standard homestead. Prizes consisting of animals and agricultural implements will be awarded to those who have shown their diligence and succeeded in their efforts to place their holdings up to the standard of the one established as model.

There has been established during the year about 3 kilometers of dike from Pikit to Pagaluñgan. It is proposed to extend same to Talitay, with an equal distance. This extension will afford protection to about one-third of the colony No. 1 and one-half of colony No. 7. There has also been opened a canal, at a cost of ₱554, between Dunguan and the headquarters of colony No. 5 in Pagaluñgan. This canal will afford means of transportation between these two points. A trail was at first thought of, but the scheme had to be abandoned on account of its expensiveness.

During the year smallpox epidemic, followed by another epidemic known as gripe, has broken out among the colonists, of which 95 per cent have been victims. These epidemics have greatly affected the crops in colony No. 2 and part of colony No. 5, the first being composed of Maguindanaos and the latter about 50 per cent of the colony.

There have been purchased during the year 22 heads of carabaos for colonies Nos. 1 and 5, either to substitute the dead animals or those who are too old to be devoted to agricultural works. There is a pressing need for the acquisition of carabaos for the use of the colonists, but due to the shortage of funds at this time, there seems to be nothing that can be done toward this end. There has been also ordered for the purpose of experimentation a Fordson tractor, to be assigned to colony No. 1.

The total area cultivated in these colonies is 2,262.20 hectares, of which 1,173 hectares are planted to corn, 509 hectares to palay, 42.16 hectares to sweet potatoes, and 20 hectares to mongos. The rest is planted with miscellaneous agricultural products.

Corn harvested amounted to 6,448.36 cavanes; rice, 2,526.28 cavanes; tobacco, 1,817 bundles; sugar cane, 2,016 kilos; sweet potatoes, 94 cavanes; mongos, 43 cavanes; and ube, 30,660 kilos.

In general, it may be stated so far that the colonies in the Department of Mindanao and Sulu, excepting Momungan, have been a success. The advances to colonists, which were stopped last year (1917), has continued during the year 1918 with the same result; that is, the colonists were self-supporting, and they do not require any assistance save in few instances, such as transportation to and from the hospital in case of sickness and the purchase of carabaos for those who need them, they being unable to pay its high cost in cash.

Judging from the results so far obtained in these colonies the Government's supervision may be withdrawn in the near future unless circumstances arise which may defeat this expectation, thus making the colonists inhabiting them independent landowners, thereby achieving the purpose of the Government in establishing the agricultural colonies in these islands.

AMERICAN AGRICULTURAL COLONY.

MOMUNGAN.

The admission of the Filipino colonists, as provided in the Legislative Acts Nos. 2254 and 2280, as amended by acts Nos. 2666, 2672, and 2711, has required a greater portion of the colony administration during the year. At the beginning of the year 14 new colonists were admitted—namely, 2 Americans and 12 Filipinos—and in August of the same year 2 more Filipino members were added. At the beginning of the year there were 28 colonists—24 Americans, married to Filipino women, and 4 widows of Americans. During the year 1 American colonist died, 1 Filipino colonist was expelled, and another colonist was removed from the American colony as a prisoner of war, the latter being a German subject.

Some radical measures have been resorted to in dealing with the recalcitrant colonists and those who would not work and always look to the colony stores for subsistence. The colony superintendent has found some difficulties along this line and has been instructed by this department to issue the corresponding warning to those who are concerned for the purpose of impressing their duties upon them as colonists under the Government. In most instances colonists who have been for some reason or other expelled from the colony were substituted by others willing to assume the indebtedness, obligations, and responsibilities incurred by the former with the Government.

About one-third of the colony is now surrounded with barbed-wire fence, making it hog proof, but on account of lack of funds no further attempt has been made to complete the fence. On account of the defective protection given to the plantations in the colony, which exposes them to the attacks of wild animals, it is estimated that about ₱5,000 worth of crops have been lost during the year. This may have some reversing effects upon the colonists, but it is expected that sufficient funds may be secured from the legislature for the entire fencing work.

The crops of this colony have been a failure during the year on account of climatic conditions. In the first place, there was excessive rainfall during the months of January and February, which destroyed the greater portion of the crops. Due also to the excessive spells of drought, the crop of rice has suffered damage to the estimated value of ₱11,392, while the amount harvested was only ₱450. The plantation of corn has also suffered damage to the extent of ₱4,255, due to drought and attack of wild hogs. Also the sweet potatoes have suffered damage to the extent of ₱900, while 4,682 kilos, amounting to ₱280.92, were harvested. To sum up the crop during the year, there have been harvested crops amounting to ₱8,294.59, while the value of the loss has been estimated at ₱26,500.

The principal crops in this colony are corn, rice, sweet potatoes, peanuts, and beans. There are also 3,000 trees of kapok, which seem to be thriving well and promise a good result. Experiments have also been undertaken with regard to the plantations of coconuts and abaca, which also seem to be doing well. Coffee is also one of the crops in the colony which is at present showing prolific and vigorous growth.

There have been established in this colony a rice mill and a corn mill. Due to the failure of crops this year, however, these mills have not been in constant operation, but it is expected when normal times come that they should be constantly kept busy milling the produce of the colonists. There has also been established an agricultural cooperative association, denominated Momungan Cooperative Agricultural Association, for the purpose of cooperating with the Government to make the colony a success. In this association differences between the colony administration and the colonists are being adjusted. The colonists are also invited to make suggestions through the association for the best interests of the colony. For purposes of recreation and social development, the Momungan Colony Club and the Momungan Colony Orchestra have also been organized.

There has been a scarcity of labor in this colony, and in certain instances laborers were imported from a hacienda at Ilagan, Lanao, which were given a salary of from ₱15 to ₱18 per month, with subsistence. This is, of course, burdensome to the colonists, but this is the best way which can be done at present in order to place the greatest area of the colony under cultivation.

BOHOL FILIPINO RICE COLONY.

With the exception of lot No. 71, all lots in this colony are already occupied. There are now 99 colonists cultivating an area of 204,981 hectares for rice plantation, besides a considerable extension devoted to the planting of corn, sweet potatoes, and the like. The crop of rice has also been affected by unfavorable weather conditions, by rats, and birds, and 27 per cent thereof was lost due to unfavorable weather. On this account the crop in 1918 can not be favorably compared with that of 1917.

The share of the Government of the rice crop amounts to 31,763½ kilos, 10 per cent of which was given to the superintendent, 19,282 kilos were sold, and 1,276 were lost, due to rats, which have always infested this colony, drought, and other causes; 1,361 kilos were distributed as seed, and the remainder has been held for sale in the store of the colony.

The legislature has granted an appropriation of ₱19,000 to this colony, out of which a sufficient amount will be set aside for the construction of a market. This will facilitate the sale of colony produce.

With the erection of a school building, through the voluntary help of the colonists, the long-felt need of the colony children will be filled.

No change in the personnel has taken place in this colony during the year.

As stated in the previous annual report, the climate in the colony is very healthful. Sanitation has been satisfactory throughout the year. Since the foundation of the colony only five persons died of different diseases; two of them were newly born babies.

The extension of this colony has already been approved, and the necessary appropriation therefor has been granted by the Philippine Legislature. Steps are now being taken to have the additional ground surveyed, and a survey party will shortly proceed to Bohol for this purpose.

CAGAYAN FILIPINO RICE COLONY.

Out of 153 lots into which this colony is divided, 108 are now being occupied by the colonists. The remaining 45 can not be made available for occupancy on account of forest found therein. There are approximately 638.22 hectares now under cultivation which are now planted with palay, corn, farm vegetables, and fruit trees. The following tabulation shows the progress of the colonists in this colony:

	Rice.		Farm vegetables— Number of hectares planted.	Corn— number of hectares planted.
	Early varieties— Number of hectares planted.	Late varieties— Number of hectares planted.		
Parcel No. 1.....	35.00	150.00	37.00	40.00
Parcel No. 2.....	45.00	236.77	64.00	30.00

Due to small number of occupants and the shortage of draft animals, the increase in the area under cultivation is rather slow. There are two yearly crops of rice in this colony—one what is called the early variety and the other is the late variety. From the first there has been harvested 22,074 cavanes of rice, while the second is reported to give a good yield, the amount of which is still unknown at the date of this report.

The corn plantation during the year has resulted in a total failure, due to the scarcity of rain and the early visit of typhoons and also to the attack of wild hogs and other wild animals around the colony. From an experiment made it is shown that tobacco in this colony grows well and will produce a good income to the colonists. An effort is now being made to devote a much more extensive area to the cultivation of this plant. It is gratifying to note that every family has taken up the raising of chickens, which promises a good result.

The colony has also undertaken the construction of an irrigation system worked out by the colonists and by some outsiders. About 4.2 kilometers in extension has already been finished. With the completion of the work of this irrigation system it may be hoped that the colony will not in the future have to depend upon weather conditions. The failure of this colony in the past has been

largely due to the uncertainty of weather. There were times when rains were so excessive that they practically killed the crop; there were times when the Rio Grande de Cagayan overflows its banks to the destruction of the plantations within this colony. The same thing may be said also as to scarcity of rain, which is fatal to agriculture.

In general, the sanitary condition of the colony has been good during the year, there having been no severe diseases with the exception of the last epidemic of Spanish influenza, of which four of the colonists were victims.

There are now in this colony 600 inhabitants with 15 children born during the year, 5 being males and 10 females. One of the greatest needs of this colony is the establishment of a school in parcel No. 1 and the detail of an insular teacher in charge thereof. This department is very anxious to have this school established and will attempt to take the matter up with the bureau of education authorities.

Even though none of the colonists in this colony has fully paid up his debt to the Government, the financial condition is better than that of the preceding year.

There is a pressing need in this colony for the purchase of more carabaos. There are at present 13 colonists who are in dire need of this animal for use in their homesteads. An attempt will be made to secure sufficient amount of funds from the legislature for the acquisition of labor animals for this colony.

FOOD-PRODUCTION CAMPAIGN (ACT 2723).

Rice seed selection.—When the department of agriculture and natural resources started the food-production campaign under Act No. 2723 it was about harvest season of 1917. The first work undertaken, therefore, was the selection of seed rice. A program was at once laid out and the number of men to supervise and actually carry on the work in the field determined according to the relative importance of the rice Provinces. Field selection was carried on in Ambos Camarines, Batangas, Bulacan, Cagayan, Cavite, Ilocos Norte, Ilocos Sur, Iloilo, Laguna, La Union, Nueva Ecija, Pampanga, Pangasinan, Rizal, Tarlac, Tayabas, and Zambales—17 Provinces in all. One hundred and ninety-two foremen and 1,205 laborers were employed. In addition to these, many farmers furnished laborers to work with the Government-paid men, but their number is not known exactly. The amount of seed rice selected was 986,528 kilos, or approximately 31,291 cavans. If all this selected seed rice were to be planted it would produce a crop of 625,820 cavans at the rate of 20 cavans per cavan of seed. Supposing that each cavan of selected seed yields but 10 per cent more than ordinary seed yields (although a normal increase of 20 per cent is not unreasonable), it will be seen that the increased yield directly traceable to the beneficial effect of selection will amount to 62,582 cavans. At the average price of ₱5 per cavan, which is a low estimate for this year, the increased crop alone is worth ₱312,910. The total expenditure for the seed selection of 1917–18 harvest season was about ₱40,000. A larger force was employed for the 1918–19 season, and 23 Provinces, as against 17 for 1917–18, were covered. Three hundred and fifteen foremen and 24,027 laborers were provided for. The total estimated expense was ₱91,170. Although the personnel provided for the 1918–19 seed-selection program was larger, as is also the territory covered, than that provided for the 1917–18, the result of the work may not be in direct proportion to the size of personnel and extent of territory, for the reason that the last harvest season coincided with the trancazo epidemic.

Corn campaign.—The work for greater corn production consisted in the main of distributing seed corn either by sale, by loan, or by donation to encourage and urge the farmers willing to help plant a greater area to corn. All told, the bureau of agriculture distributed 396 cavans. As a measure of stimulating greater interest in corn as food ₱1,000 financial aid each was given to Albay, Batangas, Cagayan, Ilocos Norte, Ilocos Sur, Isabela, La Union, Leyte, Misamis, Nueva Viscaya, Occidental Negros, Samar, and Sorsogon—13 in all—and ₱500 to Abra. With these allotments the municipalities of the Provinces mentioned were able to hold corn demonstrations on a larger scale than heretofore by using the department money to augment the municipal appropriations yearly set aside for this purpose. From partial reports received to date, in Ilocos Sur 8,775 people were served at the food demonstration; in Abra, 11,475; and in Sorsogon, 5,604.

In view of the fact that the bureau of agriculture has no appropriation for growing corn on a commercial scale for distribution as seed, the department allotted ₱13,000 for corn-breeding work at the La Carlota Experiment Station.

The object in view is to breed a variety of corn that will be suitable to Philippine conditions and to grow seed corn on a large scale for distribution. The work was begun in October, 1918, and by the end of the year variety tests of different kinds of corn obtained from various localities were under way. Work has now been commenced on the growing of seed corn on a large scale, although no figures are available as to the extent of area cultivated, etc.

Home gardens.—As a means of affording an immediate increase in the food supply of every household the laying out of home gardens was strongly advocated by the department. The field men were instructed to place emphasis on this feature of the work and to encourage the formation of one provincial food committee in each Province and municipal food committee in each municipality and civic clubs of all kinds. Notwithstanding the continuous circulars, letters, and orders of this department, only 355 civic clubs had been organized. The Woman's Club of Manila was very helpful to the campaign in stimulating the interest of the women in home gardening especially. As a result of their efforts there were something like 300 women's clubs organized in the different municipalities. A home-garden contest was announced in July of 1918 to create greater interest in home gardening. The prizes offered were ₱1,000 for the Province winning first place; ₱500 for the Province winning second place; ₱500 for the municipality, township, or municipal district winning first place in the Province; and ₱250 for the municipality, township, or municipal district winning second place. The total number of gardens qualifying for the contest, or those having an area of at least 50 square meters and maintained up to the end of the year, was 315,114 at the close of the contest, or on December 31, 1918. Laying aside altogether all considerations of the beneficial influence that such a civic movement as a home-garden campaign exerts upon the people, the 315,114 gardens reported were easily worth to the people owning them ₱630,228, placing the total products of a home garden of the area mentioned at the very low estimate of ₱2 per garden.

Poultry-swine stations.—There are now 16 poultry-swine stations established in as many Provinces. These stations were designed as models of a one-man poultry-swine farm. The principal aims are: To increase the number of pigs and chickens of improved stock for distribution, principally within the Province where the station is located; to demonstrate the management of a poultry-swine farm; and, finally, to show that a one-man poultry-swine farm can be operated profitably. At the end of the year there were 16 boars of the Berkshire breed; 27 sows, most of which are pure-blooded Berkshires, the others being of mixed or native blood; 582 hens, mostly Cantonese; 104 roosters, nearly all of the same breed; and 55 Indian runner ducks at the 16 stations. Since their establishment, or in less than a year, 1,328 animals have been added to the original stocks, which means a natural increase of 259 per cent. The number of deaths was 90, and this represents only 7.1 per cent of the total number of births. Some of the stations first established now have cockerels, pullets, and pigs for sale, and were there money available for the establishment of other stations in the other Provinces and a guarantee that, once established, they could be maintained for a reasonable period of time, new stations could be opened up with the excess stock from some of those now running.

In addition to the stations established and maintained by the department, insular aid of ₱500 to each was granted to 18 farm schools and ₱1,000 to one to enable these farm schools to enlarge the scope of their poultry projects. These schools reported a total flock of 14,063 at the end of December, 1918. Three thousand seven hundred and four chicks were raised from June to October, 1918, and 19,564 eggs were laid during the same period. The number of eggs distributed was 4,074 and the number of chickens 13,072.

Miscellaneous activities.—Large quantities of garden and field-crop seeds were distributed to farmers through provincial representatives both of the department and of the bureau of agriculture.

A loan of ₱10,000 was made to the Province of Nueva Ecija to help the homesteaders around the Central Luzon Agricultural School at Munoz. Small loans were made to these homesteaders for the purchase of work animals and farm implements principally.

Experience has shown that small loans made available at the proper time can accomplish much in the way of enabling the farmers to enlarge their farm operations.

Demonstrations by a food expert were made to the public of Manila to show what can be done in the line of food conservation. A food expert of the name of A. F. Spawn was engaged by the department for two weeks to carry on practical demonstrations. The manufacture of sweet potato flour and of

banana "coffee" brought out clearly the great possibilities of these tropical products.

STOCK FARMS UNDER ACT 2758.

By operation of Act 2758 all cattle in the Alabang stock farm, consisting of 280 head of cattle and buffaloes formerly belonging to the bureau of agriculture were transferred to this department. This cattle, together with those imported from India on April 26, 1918, constitute the present stock to be distributed among the stock farms which will be established by this department under said act. There have already been established with full equipment for operation two stock farms—one in Bongabon, Nueva Ecija, and the other in Ubay, Bohol. Both these farms have been supplied with sufficient number of cattle to start with.

There has also been undertaken during the year the selection of sites for the establishment of other stock farms—one in the Punto Mairara, Ilocos Norte, and one in Pagsanjan, Laguna.

Some of the animals imported from India have been sold to private persons. Only suitable number has been reserved for stock farms. The following statement shows the number and kinds of animals purchased from India, through E. A. Gardiner, of Singapore, in accordance with contract executed by and between the latter on April 26, 1918:

Nellore or ongale.....	541
Nellore or ongale, female, with calves.....	5
Indian buffaloes.....	65
Indian buffaloes, female, with calves.....	2
Multani.....	22
Multani, female, with calves.....	2

Total 637

Aside from the Nellore cattle there were also imported 26 head of Multani breed. This breed has been imported on account of its ability to give milk. Of 637 head of cattle above mentioned 10 died during the trip and 213 were landed at the Department of Mindanao and Sulu for the use thereof. The price and expenditure of 627 head of cattle, as per contract, amounted to ₱146,865 less the amount of ₱48,420 paid by the Department of Mindanao and Sulu for the 212 head assigned to that department.

Up to December 31, 1918, there have been sold to private persons 54 head of cattle, as follows:

- 39 nellore or ongale, at ₱260.
- 6 Multani, at ₱300
- 9 Indian buffaloes, at ₱325.

On November 7, 1918, 51 head of cattle were purchased from Mr. W. J. Mathews, of Manila, at ₱75, and added to the herd.

The cattle in the stock farms of Bongabon, Nueva Ecija, and Ubay, Bohol, are in fine shape. Up to December 31, 1918, 37 births of young calves were reported against 94 deaths, on account of debility due to the poor pasturage at the farm during the dry spell. It is expected that improvement toward cutting the rate of mortality will be obtained in the future. In the Bongabon stock farm there are 371 head of cattle, including buffaloes, and in the Bohol stock farm there are 59 Indian cattle and buffaloes plus 100 head of native cows, which were purchased in Bohol by direction of this department.

One hundred and eighty-four head of Indian cattle and buffaloes in poor condition were sent to Alabang stock farm and nearly all have now recuperated.

To meet the purposes of Act 2758 other stations will be established during the coming year in the northern and southern parts of Luzon. The animals now at Alabang will be sent to these stations as soon as corrals and buildings are completed. Promising sites for stock farms in the Provinces of Laguna and Ilocos Norte, respectively, have been inspected.

No activity may be reported as yet, in view of the fact that the stations established under Act 2758 have just begun operation, except the few sales of animals which have been made during the year and of which mention has been made above.

Respectfully submitted.

G. APACIBLE,

Secretary of Agriculture and Natural Resources.

To his excellency the GOVERNOR GENERAL, Manila:

SECOND ANNUAL REPORT OF THE DEPARTMENT OF COMMERCE AND COMMUNICATIONS.

JANUARY 1 TO DECEMBER 31, 1918.

INTRODUCTORY REMARKS.

SIR: Pursuant to the provisions of section 91 of the Revised Administrative Code, I have the honor to submit the following annual report of the department of commerce and communications for the fiscal year ending December 31, 1918. On July 22, 1918, Mr. Catalino Lavadfa, the first to occupy the position of under-secretary of this department, resigned, and the present incumbent was on July 23, 1918, appointed to succeed him. On February 23 of this year Secretary Jakosalem left for the United States as a member of the independence mission and the undersigned has since then been acting in his place.

GENERAL STATEMENT OF POLICY.

Since the organization of this department it has always been its policy to give its bureaus as much liberty of action in the prosecution of their respective activities as they can consistently do without curtailing the executive control and supervision which this office must exercise over them. This policy is adopted in order to allow the bureaus the proper initiative and the use of a sound discretion in all matters conducive to the betterment of their service.

With respect to its relations with the other departments of the Government, suffice it to say that this office has always been ready and willing to render full and earnest cooperation in the realization of any plan, or the inauguration of any policy, or the development of any enterprise which, in the opinion of its functionaries, will best subserve the interests of the people and the country.

With these few remarks we will proceed to give a general survey of the most important phases of the different activities carried on during the last fiscal year by the six bureaus under the department of commerce and communications.

BUREAU OF PUBLIC WORKS.

PERSONNEL.

Of all the bureaus of the Government, this bureau has undoubtedly suffered the heaviest in the loss of technical personnel on account of the European war. It had 11 American designing engineers, and it temporarily lost 10 of them, joining the Philippine National Guard and the Officers' Reserve Corps of the United States Army. It had 29 American district engineers, and it temporarily lost the service of 13 of them. It lost temporarily 4 Filipino engineers, who enlisted in the National Guard. It is also during the period covered by this report that the bureau was successively left by its two former directors, Mr. E. J. Westerhouse and Mr. Claud Russell.

In the 45 Provinces of the islands there are 12 American and 29 Filipino district engineers. On the Island of Luzon there are 4 American and 19 Filipino district engineers. In the Visayas there are 3 American and 7 Filipino district engineers, and in Mindanao and Sulu there are 5 American and 3 Filipino district engineers.

The total number of technical employees as of December 31, 1918, is 125, 37 of whom are Americans and 88 are Filipinos, as compared with 43 Americans and 79 Filipinos in 1917, 63 Americans and 35 Filipinos in 1915, and 81 Americans and 24 Filipinos in 1914.

PUBLIC WORKS APPROPRIATIONS.

The work of the bureau materially increases every year. This is clearly shown by the fact that the public works appropriations for the present fiscal year reached the grand sum of ₱18,731,000, which is ₱7,533,100 more than that of 1918, and exceeds that of 1917 by the wide margin of ₱13,750,930. This is the reason why the bureau is continually in need of, and must necessarily be supplied with, technical men experienced in the lines of construction and design.

ACTIVITIES OF THE BUREAU.

Roads.

The extension of the first-class road system is being continued in all Provinces, and in several instances considerable additional first-class road was declared, noticeably in the Provinces of Bohol, Occidental Negros, Pampanga, and Pangasinan.

The policy of adopting a systematic construction program, based on the transportation requirements and financial ability of each individual Province, is now beginning to bear fruit, especially in Cebu, Pangasinan, Pampanga, and Batangas. Hand in hand with this plan goes the steady consolidation of the various provincial road systems into a connected whole by means of interprovincial and intercoastal roads. Interprovincial roads are now under construction joining Iloilo and Antique, Pampanga and Bataan, Laguna and Tayabas, Tayabas and Batangas, Pampanga and Tarlac, Ilocos Norte and Cagayan, Nueva Ecija and Nueva Vizcaya, Albay and Sorsogon, Antique and Capiz. The survey of an interprovincial road between Bataan and Zambales has also been begun and a location determined for the important intercoastal Baybay-Abuyog Road in Leyte, on which construction is well under way. Much progress was likewise made on the extension of the Cagayan Valley trunk road in Nueva Vizcaya, Isabela, and Cagayan. Grading on the Naga-Pasacao Road in Ambos Camarines reached the town of San Fernando and extensive trail work was undertaken in the Mountain Provinces and the Department of Mindanao and Sulu.

All the projects above mentioned are expected to be completed in due time and are calculated to help much in the economic development of the Provinces concerned.

Below are given comparative data of the road work in the Philippine Islands for the years 1917 and 1918.

Length of roads in existence.

	Dec. 31, 1918.	Dec. 31, 1917.
	<i>Kilometers.</i>	<i>Kilometers.</i>
First class.....	4,090.2	3,738.7
Second class.....	2,015.8	2,056.6
Third class.....	3,128.7	3,393.6
Total.....	9,234.7	9,188.9

Average number of kilometers maintained.

	1918	1917
Caminero system.....	4,023.4	3,616.1
Gang system.....	2,773.5	3,057.0
Total.....	6,796.9	6,673.1

Total cost of road maintenance.

	1918	1917
Caminero system.....	₱2,756,810.70	₱2,143,887.68
Gang system.....	589,450.32	560,258.92
Total.....	3,346,261.02	2,704,146.60

Average cost of maintenance per kilometer per year.

	1918	1917
Caminero system.....	₱885.19	₱592.87
Gang system.....	212.53	183.27

BRIDGES.

While bridge construction has been somewhat curtailed during the past year owing to the lack of material in the local market, it has been possible, nevertheless, to erect several important structures.

The Santiago River Bridge on the Manila-Tarlac Road, between the municipalities of Concepcion and Magalang, was practically finished at the end of the year. This structure closes the last important bridge gap in the through highway route between Manila and Tarlac. The Navotas Bridge of the standard slab and girder concrete type has been completed, and so was the steel bridge in Camiling, Tarlac, opened to traffic early in the year. At Imbang River, on the Sillay-Guinabalaon Road, Occidental Negros, another bridge which is a notable example of the so-called overflow type was also completed.

A reference to the records of previous years will show that the total number of durable bridges and culverts in existence was 6,206 for 1914, 6,640 for 1915, 7,156 for 1916, 7,370 for 1917, and 7,426 for 1918.

The total number of reinforced concrete structures in existence was 3,247 in 1914, 3,690 in 1915, 3,973 in 1916, 4,138 in 1917, and 4,233 in 1918.

The appropriations made by the legislature for road and bridge funds for 1918 were the same as those for 1917, namely, ₱3,000,000 (Act No. 2736 and Act No. 2704). These appropriations were for regularly organized Provinces alone and did not include the road and bridge funds collected by the Provinces from cedula tax, land tax, and their participation in the internal-revenue taxes. In this connection it must be stated that a large amount of road work during the last year was done with purely provincial funds, and in some cases municipalities have had street construction and maintenance done by the district engineer, noticeably in Pampanga, Laguna, Tayabas, and Iloilo.

PORT WORKS.

The port works activities of the bureau during 1918 were confined to the construction of projects already under way and the study of various future developments. Work along this line is now in full progress on piers Nos. 3 and 5, Manila; in the reclamation dock area of Cebu, Cebu; in Tacloban, Leyte; in Iloilo, Iloilo; in Catbalogan, Samar; and in Catarman, Samar. At Tagbilaran, Bohol, the channel through the outer reef was completed and the port is now open to interisland steamers of large size. At Aparri, Cagayan, the improvement of the port was continued and a channel dredged permitting ships to enter the river without difficulty. In Mindanao and Sulu wharf construction was carried on at Overton, Davao, and Jolo, and the new structure at Zamboanga begun in 1916 was completed. At Dumaguete, Oriental Negros, the rock-fill breakwater for the port in that place was advertised for bids, but no tenders were received. However, with the additional funds that will be made available for this project during the present year, it will be possible to offer a more attractive proposition to contractors and to proceed with the successful termination of the work.

In the matter of port construction and improvement in the islands we must again reiterate what we have always advocated in the past, namely, that the Government equipment for port works should be continually increased and a more ambitious program outlined for the years immediately to come. The wisdom and desirability of such a plan is especially apparent now when economic awakening is taking place throughout the world. The afterwar times are bound to be replete with industrial and commercial activities of every kind, and if the Philippines is to reap her full share in these matters, she must be provided with as many excellent ports as can possibly be built so as to attract foreign commerce to these shores. Great progress along this line has been made in the past, but the increase in production has been larger, and the demand for dock facilities by the producing centers and by the interisland freight-

ers is constantly growing. Due to the geographical formation of the Philippines, marine transportation will always be her most important means of communication, and it is also for this reason why she is expected in time to be the greatest trade center of the Orient when provided with proper facilities.

DREDGING.

The record shows that the great amounts of dredging work accomplished during 1918 were done on the outer bar, 226,230 cubic meters; outer harbor, 215,617 cubic meters; lower Pasig River, 95,869 cubic meters; Iloilo River, 67,325 cubic meters; Vitas Estero, 55,323 cubic meters; and several other minor dredging, making a sum total of 815,343 cubic meters of dredging work done.

The dredge equipment of the bureau was in fair condition only at the beginning of the year, and numerous breakdowns have reduced the dredging accomplished during the past 12 months. The acquisition of the dredge *America* and its reconstruction will add materially to this class of equipment, but if the increasing demands of foreign and domestic shipping are to be met the acquisition of new dredges and scow equipment is necessary unless the present equipment is thoroughly overhauled.

BUILDINGS.

The first product and the best example of the new policy adopted by the Government in the architectural design of public buildings is the Pangasinan capitol at Lingayen, which was inaugurated in February of this year. This structure, ornamented as it is with magnificent artistic effects, presents a striking contrast to the standard Government building of the past, devoid of all kinds of embellishments, which is now being abandoned to give way to a more picturesque and attractive style of architecture.

The Pangasinan capitol building is 55 meters long by 18.4 meters wide, and is surrounded by a wide, concrete terrace with a massive concrete balustrade. An idea of the magnitude of the work entailed in this edifice may be gained from the fact that over 8,000 barrels of cement, nearly 1,100,000 kilograms of reinforced steel, and approximately 50,000 cubic meters of crushed stone were used in the concrete work, while of the total of ₱370,000 expended in its construction, the labor cost was ₱108,000. The design of this building called for the utmost care in construction, but the results obtained compare very favorably with the best work of its kind in foreign countries.

The construction of capitol buildings at Laoag, Ilocos Norte, and Tacloban, Leyte, was continued during the year. These buildings, while not so pretentious as the Pangasinan capitol, call for similar care in their construction, and the use of special ornamental features. At Zamboanga a normal school building and an additional wing for the hospital were under construction at the end of the year.

The usual school and market building work was executed, the record showing that 27 schools and 19 markets were completed in 1918 as against 32 schools and 15 markets completed in 1917.

In general, building construction was seriously handicapped throughout the year because of the lack of materials and transportation facilities.

WATERWORKS CONSTRUCTIONS.

The activity of the bureau along this line was greatly hampered by restrictions on the shipment of pipe and fittings from the United States on account of the war. Work was started on the Barili system for the town of that name in Cebu, and was about 70 per cent completed at the close of the year. In Batangas the installation of a water-supply system, using artesian wells as a source of supply, was completed, with the exception of the installation of the pumping machinery, which has been under order for some time from the United States. At the municipalities of San Jose, Antique, and Pagsanjan, Laguna, the construction of waterworks systems has been begun and was well under way at the close of the last year. In Tagbilaran, Bohol, the system, which has been in successful operation for some time, was extended to supply water to Dauls, and preliminary construction for the combined waterworks systems for Tayabas and Lucena has already been started, the necessary materials for this project having arrived from the United States.

late last year. In Jolo, Sulu, the water-supply system was completed in October, 1918, and the spring flow of 1,500,000 gallons per day is believed to be sufficient for the future growth of the city.

In the construction of artesian wells an unusual success has been attained in 1918, as shown by the fact that 165 of them were successfully driven during this year, compared with 108 in 1917. The nearest approach to the number of successful wells drilled during the year just ended were those of 1915, which were 18.7 per cent less than for 1918. Compared to the successful results of 1917 the accomplishment of 1918 is an increase of 52.8 per cent. The wells completed during this year furnish potable water to a population of approximately 230,000.

IRRIGATION WORKS.

The irrigation activities of the bureau of public works during the past year have been confined largely to the maintenance of irrigation systems constructed by the Government, the repair and improvement of irrigation systems in the friar lands estates, and the surveys and preliminary field investigations of new irrigation projects. Very little has so far been done along this line on account of the difficulty of securing the necessary personnel, considering that irrigation is a highly specialized branch of engineering and requires the best trained and most experienced men. It is to be regretted that such a condition obtains, especially when a shortage of food production is being felt in the Philippines at the present time. However, it is confidently expected that the establishment of irrigation systems throughout the islands will soon be undertaken with vigor as the demand for them becomes more and more urgent every day. No effort is being spared to accomplish this end. The organization of the irrigation personnel has been in progress since last year; the hydrographic investigations and topographic surveys are now in progress for the irrigation projects in San Jose, Nueva Ecija; Laoag-Vintar, Ilocos Norte; Botolan, Zambales; Naic, Cavite; San Mateo, Rizal; Bulo River, Bulacan; Pansol Creek and Talisay River, Bataan; Nyom River, Provinces of Zambales and Pangasinan; Sierra Bullones River, Bohol; and Bued River, Provinces of Pangasinan and La Union.

THE OPERATION AND REGISTRATION OF MOTOR VEHICLES.

The number of motor vehicles registered during the year was 1,301 new registration, and 6,078 reregistration, making a total registration of 7,379, as against 6,024 of last year. Of this total, 1,143 motorcycles and other motor vehicles having less than four wheels are included.

In the licensing of operators 35,000 applicants were examined and 3,259 new licenses issued. Including renewals, 8,150 drivers were licensed to operate motor vehicles.

BUREAU OF POSTS.

ORGANIZATION AND PERSONNEL.

The progress made by this bureau in the preceding years continued during the period covered by this report. At the close of 1918, there were in operation 828 post offices, 319 money-order offices, 394 postal savings banks, 315 telegraph offices, and 10 radio stations; a gain over the previous year of 10 post offices, 1 money-order office, and 6 postal savings banks. The records of the different divisions show that the net earnings of the bureau for 1918 amounted to ₱722,417.58, as against ₱170,335.11 for 1917, or an increase of ₱552,082.47, thus making the bureau of posts not only self-supporting but also a source of revenue to the Philippine Government.

The personnel of the bureau as of December 31, 1918, was composed of 65 Americans and 8,053 Filipinos, as compared with 81 Americans and 2,872 Filipinos in 1917, 99 Americans and 2,812 Filipinos in 1916, 109 Americans and 2,552 Filipinos in 1915, 122 Americans and 2,515 Filipinos in 1914, and 187 Americans and 2,343 Filipinos in 1913. During the year there was a decrease of 16 in the American personnel and an increase of 181 in the Filipino personnel.

Since September 16, 1918, Mr. José Topacio, the assistant director, has been acting director of the bureau, due to the assignment to the censorship office and vacation leave of Mr. R. M. Shearer, the director.

ACTIVITIES OF THE BUREAU.

POSTAL OPERATIONS.

During the year 10 new post offices were established and at present there are but 37 of the 817 municipalities in the Philippines without post offices. Eighteen of these 37 municipalities without post offices are very new, having been created only at the beginning of the year 1918. Free-delivery service is now in operation in 462 municipalities, and at the end of the year there were in operation 435 mail routes, an increase over the previous year of 9 mail routes. Mail was carried over 2,096,662.78 kilometers, as compared with 2,045,088 kilometers in 1917, an increase of 51,573.81 kilometers, or 2.57 per cent.

FOREIGN PARCEL POSTS CONVENTIONS.

During the year a parcel post convention was concluded between the Government of the Philippine Islands and North Borneo, and a parcel post convention was concluded between the United States and the Portuguese Colonies of Macao and Timor, in which the Philippines has the privilege of participating. Parcel post convention is now pending between the Philippine Islands and Japan.

In 1918, 18,680 parcels were sent to foreign countries, an increase of 261 per cent over the previous year. The total number of parcels received from foreign countries was 13,090, an increase of 55 per cent.

MONEY-ORDER SERVICE.

The total number of orders issued during the year was 462,825, an increase of 13,988, or 3.1 per cent, amounting to ₱31,469,065.26, an increase of ₱6,227,040.86, or 24.6 per cent over 1917. The fees on these orders amounted to ₱144,142.12, an increase of ₱12,487.40, or 9.4 per cent.

The total amount of money orders sent out of the Philippine Islands by means of the money-order service was ₱2,032,848.28, a decrease of ₱722,042.10, or 26.2 per cent. The amount of the United States and foreign orders paid in the Philippine Islands was only ₱867,012.12, thus leaving a balance against us of ₱1,165,836.16.

POSTAL SAVINGS BANKS.

The total deposits amount to ₱5,799,592.05, which represent 78,124 depositors and shows an increase of 9,264 depositors and ₱873,362.16 in deposits. The net earnings for the year were ₱62,239.01. This is the first time in the history of the postal savings bank that its operations rendered profit. The net deficit on December 31, 1917, was ₱67,971.91. This development is of great significance, showing, as it does, that the inhabitants of the Philippines are fast acquiring the habit of saving, which is the very object intended to be encouraged by the postal savings banks.

TELEGRAPHIC OPERATIONS.

The 315 telegraph offices and 10 wireless stations which are in operation have a total of 9,123.74 kilometers of land lines and 1,405.63 kilometers of cables, an increase over the previous year of 313.88 kilometers of the former and a decrease of 181.74 kilometers of the latter, which decrease was due to the substitution of land lines for cables.

There were 1,233,280 telegraph messages handled in 1918 as compared with 913,615 for 1917, an increase of 319,765 messages, or 35 per cent, and a corresponding increase in the receipts of ₱331,531.16, or 39.6 per cent. The total receipts were ₱1,167,600.62 and the total expenditures were ₱795,727.81, leaving a net profit of ₱371,872.81.

PROJECTS UNDER CONSIDERATION.

It is to be regretted that at present the quarters for post offices in Provinces have to be rented. This is not only financially disadvantageous to the Government but in many cases it impairs the efficiency of the service. To remedy this situation there should be appropriated every year adequate sums to build post-office buildings in the capitals of the Provinces, especially in Cebu, Iloilo, Zamboanga, Vigan, Albay, Tacloban, and Lingayen.

The program for the construction of radio stations in all important ports of the Philippines and in every populated island should also be continued with greater vigor. The rapid commercial development of the Philippines demands the establishment of these means of communication.

Another project which is being seriously studied by this bureau is the use of aeroplanes as a means of transporting mail matter. It is reported by several countries of Europe and the United States which already have organized aerial postal services that the same are rendering satisfactory results. All the necessary data are therefore now being gathered looking to the adoption of this system in the Philippines.

BUREAU OF COMMERCE AND INDUSTRY.

ORGANIZATION AND PERSONNEL.

On January 31, 1918, the Philippine Legislature passed Act No. 2728, "An act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes." On February 19 of the same year the senate confirmed the appointment of Mr. James J. Rafferty, then collector of internal revenue, and of Mr. Fidel A. Reyes, as director and assistant director, respectively, of the new bureau, and shortly thereafter steps were taken toward the organization of the same.

The personnel of the bureau of commerce and industry as of December 31, 1918, totals 1,589, 12 of which are Americans, 35 foreigners, and the rest Filipinos.

ACTIVITIES OF THE BUREAU.

The organization of Philippine commercial agencies in foreign countries.

One of the first actions taken by the secretary of commerce and communications for the successful prosecution of the functions intrusted to the bureau of commerce and industry was to recommend the sending of Director Rafferty to the United States for the purpose of making a thorough survey of the commercial field therein in the interest of Philippine trade. Accordingly, on August 28, 1918, Director Rafferty was authorized by his excellency the Governor General to proceed to the United States on a tour of duty to carry out the instructions issued to him by Mr. Dionisio Jakosalem, secretary of commerce and communications, which are embodied in the following abstract of his letter of August 8, 1918:

* * * * *

"Preliminary to the organization of the Philippine commercial agencies in foreign countries for the proper promotion of the Philippine foreign trade, it now becomes necessary to proceed with the collection of materials of commercial character abroad in the interest of the business of the Philippines and for the proper prosecution of the activities of the bureau of commerce and industry.

"With the above consideration in view, the first country, of course, which strikes the preferential attention of this department is the United States, where an agent of the Philippine Government, with all the necessary instructions based upon the commercial data actually on hand, should be sent. It is considered wise, however, that before appointing any foreign agent an official of the bureau of commerce and industry be sent to the United States for the purpose of making a thorough survey of the commercial fields therein, and upon the result thereof to recommend to the Philippine Government the best plan by which the bureau of commerce and industry could carry out properly its legal functions in the interest of the Philippine trade in foreign countries."

Mr. Rafferty's report on the result of his investigation will be given due publicity upon his return to the Philippines.

THE RICE PROBLEM.

An important work which this bureau was called upon to undertake during the year was the handling of rice to put down the so-called rice crisis of 1918. By virtue of Executive Order No. 36, issued on October 7, 1918, which suspended the customs duties on rice imported into the Philippine Islands for the remainder of 1918, the bulk of the work in carrying out the provisions of

said order fell on the bureau of commerce and industry. Pursuant to the provisions of this order, the bureau formulated the necessary instructions and regulations as approved by the department for the fixing of the price and distribution of the rice imported into the Philippines free of duty.

The total amount of rice admitted free of duty up to December 31, 1918, by virtue of this executive order, which ceased to be enforced since that date, was as follows:

	Kilos.
Manila.....	12, 661, 289
Cebu.....	21, 058, 722
Iloilo.....	1, 713, 675
	35, 433, 686

The average maximum prices fixed by the government were:

	Per sack of 56½ kilos.
Manila.....	₱10. 10
Cebu.....	9. 65
Iloilo.....	10. 29

On Saigon rice imported free of duties an average price f. o. b. Saigon of ₱7.17, at an average rate of exchange of 166, was paid per picul of 60.7 kilos. The average freight paid was ₱2.38, and the average miscellaneous expense was ₱0.65, making an average total cost per picul of ₱10.20 in the Philippine market.

WORK OF THE DIFFERENT DIVISIONS OF THE BUREAU.

DIVISION OF VESSELS AND LIGHTHOUSES.

This division is in charge of the following vessels, which were transferred from the bureau of customs: The cable ship *Bustamante*, the cutters *Basilan*, *Corregidor*, *Gilbert*, *Negros*, *Polillo*, and the launches *Ranger*, *Jolo*, *Ethel*, *Ilocano*, *Rizal*, *Moro*, *Harbor No. 3*, and *Viola*.

The cable ship *Bustamante* maintains the submarine cables throughout the islands, and in addition thereto made a voyage for rice for the Province of Iloilo and two voyages to Balikpapan for crude oil. The cutters, besides being used for lighthouse inspectors and other official assignments, have been very instrumental in relieving the shortage of interisland tonnage, which was keenly felt during the year and which resulted in a scarcity of rice in several isolated places of the archipelago. The launches are used in the transportation to and from Engineer Island of laborers and supplies.

THE EX-GERMAN VESSELS.

These were the *Nipsic*, *Quantico*, *Laensamud*, *Quinnebaug*, *Iosco*, *Yazoo*, *Raritan*, and the *Midget*. They were chartered to the Philippine government by the United States Shipping Board and were for some time operated by the bureau of commerce and industry. Early in 1918 the insular government decided to subcharter six of the above-named ships and bids for them were duly advertised. Madrigal & Co., the highest bidders, were awarded the ships, and a charter party to this effect was entered into on April 1, 1918, between said company and the government of the Philippine Islands on the vessels *Laensamud*, *Quinnebaug*, *Iosco*, *Yazoo*, and *Raritan*. The *Quantico*, by order of the Shipping Board, was transferred to Robert Dollar & Co., by whom it was operated until it was totally wrecked off Tablas Island by the typhoon of December 25, 1918. As to the *Nipsic* and the *Midget*, they are still being operated by this bureau.

On February 26 and upon request of the charterer, the charter contract with Madrigal & Co. for the five vessels above mentioned was canceled, and they were again offered for charter. On February 28 Fernandez Hermanos were awarded the contract for the said vessels, excepting the *Laensamud*, which the department secretaries, acting jointly, finally decided should be operated by this department through the bureau of commerce and industry, in view of the fact that the bids received to charter the same do not conform with the conditions required by the government.

MARINE RAILWAY AND REPAIR SHOPS.

Transferred from the bureau of customs on March 16, 1918, these shops are now a part of the bureau of commerce and industry. Work is performed for all branches of the government and, with the approval of this department, for private parties, on a basis of cost, plus a surcharge of 10 per cent and a percentage for nonproductive labor, etc. The plant is thereby self-supporting. The net income for the last year amounted to ₱70,259.80. Save the United States navy yards, Olongapo and Cavite, Engineer Island is the best-equipped shipyard in the Philippines. Here is done all shipbuilding and repair work of the insular and provincial governments. The lighthouse shop performs all lighthouse repair work and fabricates lighthouse apparatus for the smaller order of lights.

The shops have given employment to hundreds of laborers and the number on the pay roll on December 31, 1918, was 741.

REGISTRATION OF CORPORATIONS AND OTHER BUSINESS ENTERPRISES.

The functions and duties heretofore performed by the division of archives, patents, copyrights, trade-marks, and corporations of the Philippine Library and Museum with reference to the registration of corporations, etc., were transferred to the bureau of commerce and industry by virtue of Act No. 2728 creating said bureau. From April 16, 1918, the date the bureau assumed charge of said work, to December 31, 1918, the records show that six licenses were issued to foreign corporations; 177 articles of incorporation of stock corporations and 45 articles of nonstock corporations were filed, making a total collection of ₱23,184, including the fees paid for the filing of 34 certificates of increase of capital stock, 17 amended articles of incorporation, 221 by-laws of corporations, and the issuing of 231 certified copies of miscellaneous documents. In this section were also filed 116 articles of incorporation of rural credit associations and by-laws—exempt from payment of fees.

The amount collected by the Philippine Library and Museum from January 1, 1918, to April 15, 1918, was ₱5,342, making the total fees for 1918 ₱28,526, as against ₱13,984, the amount of collections for 1917, an increase of over 100 per cent. Several reasons may be attributed to this increase. Commercial and industrial activity was greater in 1918 than in any other previous year. New enterprises were formed, most of which took the form of corporate organizations. This is shown by the fact that about 30 new oil corporations were organized aside from the old companies which raised their capital stock during the year.

As to the registration of partnerships, the records show that during the period commencing May 13, 1918, the date of transfer to this bureau, and ending December 31, 1918, there were registered 103 articles of copartnership giving a collection of ₱4,018.50. Including the fees charged for other miscellaneous commercial documents, a total of ₱4,455 was realized.

The patents and trade-marks section shows that during the period commencing April 16, 1918, the date of transfer to this bureau, and ending December 31, 1918, there were registered 220 trade-marks, which paid a fee of ₱50 each. Including the charges made for the filing and recording of other documents having to do with patents and trade-marks, the total collection during the year amounted to ₱11,335.

In conjunction with the legal division, there are the statistics division, the industrial organizations division, the markets and exchanges division, the commercial research division, and the commercial intelligence division. The nomenclature of these different divisions indicates their respective functions. The industrial organizations division and the markets and exchanges division are still unorganized, but their complete formation is being rapidly accomplished.

RÉSUMÉ OF PHILIPPINE TRADE AND INDUSTRY DURING THE YEAR.

The total foreign trade of the Philippine Islands reached the sum of ₱468,563,494 in 1918 as compared with ₱322,802,674 in 1917, which is an increase of ₱145,760,820, or 45.1 per cent. The exports alone amounted to ₱271,365,071, compared with ₱191,208,613 in 1917, which is an increase of ₱80,156,458, or 41 per cent, while the imports reached ₱197,198,423, against ₱131,594,061 in 1917, which is an increase of ₱65,604,362, or 50 per cent.

As shown from the foregoing, the foreign trade of the Philippines has decidedly taken a change for the better. A wave of prosperity is perceptible throughout the islands, and Filipino capital is now being invested in every line of business enterprise, as evidenced by the fact that during the year there were registered 72 industrial domestic corporations, with a paid capital of ₱10,008,060.50 as compared with 21 in 1917 with a paid capital of ₱2,557,005.90. In conjunction with these corporations, it is confidently believed that the creation of such governmental enterprises as the National Development Co., the National Coal Co., the National Iron Co., and the National Cement Co., recently authorized by the legislature, much will be accomplished in the exploitation of our natural resources and the development of our industrial activities.

BUREAU OF SUPPLY.

ORGANIZATION AND PERSONNEL.

Slight modifications have been made during the year in the office organization of this bureau. As its organization now stands, the bureau of supply proper is made up of an executive division, a buying division, a division of supplies, and an accounting division. The ice plant, while under this bureau, is a sort of an independent entity.

The civil-service classified personnel on January 1, 1918, consisted of 14 Americans and 84 Filipinos. Forty-nine appointments were made during the year, the number of separations for the same period being 40 in all, and are classified as follows: Resignation, 5 Americans and 19 Filipinos; transfer, 10 Filipinos; and retirement, 6 Americans. On December 31, 1918, the staff, therefore, was made up of 3 Americans and 104 Filipinos as compared with 14 Americans and 84 Filipinos in 1917, 17 Americans and 81 Filipinos in 1916, 21 Americans and 79 Filipinos in 1915, 26 Americans and 80 Filipinos in 1914, 34 Americans and 88 Filipinos in 1913.

On January 9, 1918, Mr. Charles H. Magee, the purchasing agent, was granted an extended leave of absence to June 7, 1919, and since January 10, 1918, Mr. Cipriano E. Unson, the assistant purchasing agent, has been in charge of the bureau as acting purchasing agent.

OPERATIONS OF THE BUREAU.

Purchase and sale.

In spite of the decidedly unfavorable conditions that prevailed, the year 1918 broke the record heretofore established in the volume of work done. Combined purchases and sales amounted to ₱25,506,217.63, or an increase of ₱3,595,327.15 over 1917. Purchases which aggregated ₱12,663,502.68 exceeded the previous year by ₱3,385,755.22, or 36.493 per cent. Of this total, ₱9,744,748.50, or 76.95 per cent, were local, or made through Manila merchants; ₱2,718,916.28, or 21.47 per cent, from the United States; and ₱199,837.90, or 1.58 per cent, from foreign countries.

Requisitions and orders.

An average of nearly 1,250 requisitions per month was received, the actual total for the year being 14,994, 109 more than in 1917, of which 7,517 were from insular bureaus and offices and 7,477 from provinces and municipalities; 137,036.482 metric tons of cargo—41,287.496 received and 95,768.986 shipped—were handled, covered by 17,062 bills of lading; 3,985,336 board feet of lumber were received and 4,220,270 were issued; sales vouchers aggregated 85,413; 1,120 orders were placed through the purchasing agent at New York, containing approximately 63,000 items; 17,062 bills of lading and about 38,000 bills were checked, indexed, and passed for payment; 24,000 vouchers were prepared and certified for payment.

Collections and disbursements.

Collections and disbursements amounted to ₱10,607,844.13 and ₱13,691,915.58, or an increase of ₱2,081,065.23 and ₱4,685,962.53, respectively; 3,595 official receipts were issued, while the number of warrants drawn aggregated 12,860; 84,999 serial receipts and 42,461 issue slips were given out. The total number of entries required by the business transacted is estimated at over 8,000,000.

Earnings.

The gross earnings, exclusive of the division of cold storage, amounted to ₱900,703.18 against ₱547,541.83 for 1917, or an increase of 64.49 per cent. The net receipts, with the operating expenses and the cost of office furniture and equipment purchased deducted, were ₱512,623.70. This is ₱278,661.15 more than in 1917, or an increase of 119 per cent. The percentage of operating expenses to cost value of sales was only 3.135 per cent, as compared with 3.376 per cent, the percentage for the previous year, until then the lowest.

The great amount of work required of and accomplished by the bureau of supply, as shown in the foregoing data, was the natural result of the increasing activities of the different branches of the Government and the creation of new governmental entities. Necessarily the work of this bureau must increase as the needs of the Government increase.

THE ICE PLANT.

The gradual reconstruction work of the main building, begun in 1911, so as to convert it into a modern concrete structure throughout, is now practically completed, the total cost to date being ₱799,693.32.

The gross earnings aggregated ₱575,921.84, ₱86,013.05 more than in 1917, while the expenses, including ₱36,203.24 for building reconstruction and ₱6,810.27 for purchase of equipment, amounted to ₱435,413.64, or ₱15,751.62 more than the year previous. The net gain was, therefore, ₱140,508.20. This represents an increase of ₱70,261.43 over 1917.

BUREAU OF LABOR.

ORGANIZATION AND PERSONNEL.

Due to the establishment of new employment agencies and to the transfer to this bureau of the migration office of Cebu, which until the end of the year 1917 was under the control of the Government of the Department of Mindanao and Sulu, it was found necessary to create what is now called the division of provincial employment agencies. Consequent upon this change and the increasing work of the bureau, the number of personnel was correspondingly enlarged from 55 in 1917 to 99 in 1918. The personnel is entirely Filipino.

ACTIVITIES OF THE BUREAU.

Employment agencies.

Employment agencies are now established in Manila, Cebu, Iloilo, Ilocos Norte, Leyte, Pangasinan, Batangas, Albay, and Cagayan. The total number of laborers registered in 1918 was 5,992 as compared with 7,056 in 1917, and the total number accommodated for the respective years was 5,736 and 5,385.

Interisland migration.

The number of emigrants sent during the year by the bureau's employment agencies was 7,919, of which 234 were sent by private concerns. This means an increase of 78.27 per cent in the interisland migration of laborers, as only 4,442 migrated in 1917. It is pleasing to note such a progress, for the proper distribution of labor will surely do much for the economic development of the country and the betterment of the conditions of workingmen. That the legislature is not unmindful of this fact is shown by the greater appropriation, amounting to ₱350,000, made for this purpose this year as compared with the sum of ₱200,000 appropriated last year. It is hoped that the funds made available for this undertaking be increased every year, considering the importance of the matter. In this connection it should be mentioned that during 1918 a total of 2,761 Filipinos emigrated to Hawaii. This drain in our laborers will, if it continues, undoubtedly prove prejudicial to the interests of the country, and it is believed that better inducements and more liberal terms to compete with those given by the Hawaiian Sugar Planters' Association should now be offered to laborers in the way of interisland migrations in the Philippines.

Strikes.

During the period covered by this report, 84 strikes, involving 16,289 workers, occurred in different parts of the islands. Sixty-three of these strikes, as against 37 of the previous year, occurred in Manila alone, covering 10,046 men and 1,007 women. The principal cause for these labor disturbances was, as usual, the continued and accelerated high cost of living. Through the intervention of the bureau of labor, 63 of these strikes were amicably settled and 21 were withdrawn.

Committee on conciliation and arbitration.

Worthy of being mentioned was the formation of this body during the early part of last year. The first of its kind in the Philippines, this committee was due to the initiative of the Union de Tabaqueros de Filipinas in behalf of the laborers, and the Manila Tobacco Association, which represented the cigar factories in this city. On the request of both parties, the inaugural meeting was presided over by the Hon. Manuel L. Quezon as intermediary. The most important agreement entered into by the above-named entities was that each shall appoint three representatives who shall constitute a "Committee on Conciliation and Arbitration," to which shall be referred for decision all questions arising between employers and employees, it being prohibited to both parties the taking of radical measures without first submitting their controversies to said committee. The decision of the committee in order to be binding must be approved by at least two members of the representatives for each party. The committee can also appoint an arbiter, whose decisions shall be compulsory to both sides.

In the words of President Quezon, this "compromise" entered into by the Manila Tobacco Association and the Union de Tabaqueros de Filipinas carries within itself an inestimable merit, it being the first decided step ever taken in these islands toward a clear understanding between capital and labor.

Trade associations and labor unions.

According to the investigation conducted by the bureau of labor, the total number of labor societies in Manila at the close of 1918 was 143, representing 147,331 members. Eighty-four of these unions have as their chief aim the mutual cooperation among the members. This manifestly shows that the Filipino laborer has come to realize the value of social consciousness and is fast learning to protect his own interests.

BUREAU OF COAST AND GEODETIC SURVEY.

ORGANIZATION AND PERSONNEL.

This bureau possesses a computing division, the work of which is the checking of all field computations, the adjustment of triangulations, the reduction of tidal observations, and the like; a drafting and geographical division, which is in charge of the making of charts and maps; and a nautical division, which attends to the sale of charts and the publication of Notices to Mariners and the Sailing Directions and Coast Pilots of the Philippine Islands.

With the exception of the director, who has always been an American, being an officer of the United States Coast and Geodetic Survey, the personnel of the bureau has been entirely Filipino since 1917, numbering 26 in all as compared with 4 Americans and 24 Filipinos in 1913, 4 Americans and 23 Filipinos in the years 1914 and 1915, and 1 American and 25 Filipinos in 1916.

ACTIVITIES OF THE BUREAU.

Three surveying ships—the *Pathfinder*, the *Fathomer*, and the *Romblon*—were operated by the bureau during the year. The work accomplished by these ships from July 1, 1918, to December 31, 1918, is shown in the attached table.

	Pathfinder.	Fathomer.	Romblon.	Total.
Triangulation:				
Square miles of area covered.....	122.0	.....	115.2	237.2
Signals and scaffolds erected.....	11.0	.....	1.0	12.0
Station occupied (horizontal angles).....	26.0	8.0	8.0	42.0
Geographical position determined.....	24.0	8.0	8.0	40.0
Station occupied (vertical angles).....	5.0	.....	.....	5.0
Bench marks established.....	.....	.....	2.0	2.0
Topography:				
Square miles area covered.....	404.0	.2	95.4	499.6
Miles of coast line surveyed.....	98.0	6.0	49.8	153.8
Miles of rivers and creeks surveyed.....	56.0	.....	1.7	57.7
Miles of roads surveyed.....	22.0	.....	.....	22.0
Topographic sheets completed.....	7.0	1.0	2.0	10.0
Hydrography:				
Square miles of area sounded.....	276.0	1,030.3	420.3	1,726.6
Miles run while sounding.....	2,782.6	1,445.9	2,668.1	6,896.6
Number of soundings made.....	54,678.0	5,666.0	22,897.0	83,241.0
Tidal stations established.....	12.0	.....	2.0	14.0
Current stations.....	1.0	.....	.....	1.0
Hydrographic sheets completed.....	4.0	2.0	1.0	7.0
Number of days in the field.....	138.0	70.0	121.0	.....

NOTE.—All distances are in statute miles.

In general the operations of the bureau were greatly handicapped throughout the year owing to the increased cost of supplies and the transfer of officers of the United States Coast and Geodetic Survey to active service with the Army and Navy.

RECOMMENDATIONS.

Before concluding this report the undersigned respectfully submits the following recommendations, based upon the experience of the different bureaus under this department. Some of these recommendations have already been made on previous occasions, but they are here reiterated:

1. That the Government equipment for port works be continually increased, as the growing commercial activities of the Philippines demand that a more ambitious program along this line should be undertaken every year.

2. That greater appropriations be made for the construction of radio stations in all important ports of the Philippines and in every populated island.

3. That liberal appropriations be made for the establishment of commercial agencies abroad.

4. That compulsory arbitration of labor disputes be established in the Philippine Islands.

5. That the appropriation for the encouragement of interisland migrations be increased each year, so as to enable the Government to offer better inducements for the proper distribution of laborers in the Philippines.

The reasons for the above recommendations are fully discussed in the reports of the bureaus under this department, the same being made a part hereof for more detailed information.

Respectfully submitted.

VICENTE MORENTE,
Acting Secretary of Commerce and Communications.

His excellency the GOVERNOR GENERAL,
Mantla, P. I.

APRIL 30, 1919.

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